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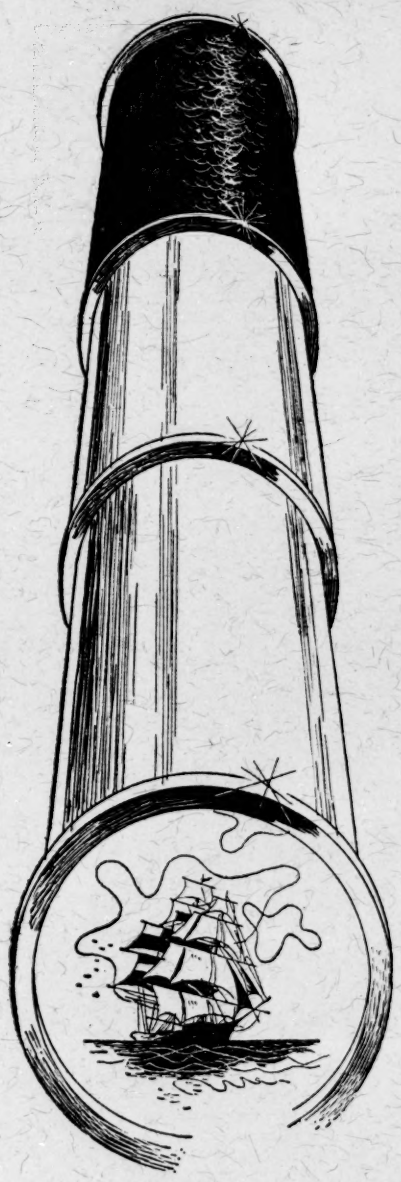

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About Our Authors . . .

Our lead article in this issue is a stimulating discussion of the present bases and functions of conciliation and arbitration. It was written by **Judge W. S. Lane,** who attended Victoria College and Osgoode Hall and was appointed to the Bench as County Court Judge of the County of Prince Edward in 1945. Judge Lane's article is taken from remarks which he made in a conference on Industrial Relations held at Western last Spring.

Britain's growing consciousness of the importance of industrial design is described by **Gordon Russell,** Director of Britain's Council of Industrial Design. Mr. Russell's activities in this field are widespread. He established the furniture firm of Gordon Russell Ltd. and has designed pieces for members of the Royal Family. He has travelled extensively and has written, lectured, and broadcast for many years. He was elected a Royal Designer for Industry, is a member of the Council of the Royal Society of Arts and of the Council of the Royal College of Art, and was an original member of the Executive Committee of the 1951 Festival of Britain.

A fine companion piece for Mr. Russell's article is "Colour — Today and Tomorrow", by **W. E. Carswell,** Associate Professor of Architecture at University of Toronto. Mr. Carswell attended the School of Practical Science, University of Toronto, and did post-graduate work at Columbia. Beyond his academic responsibilities, he is a colour consultant for a Canadian paint company. In the near future, the

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About Our Authors . . .

Editors plan to publish the third and final article of this series, "Lighting in Industry".

H. Scott Gordon, a graduate of Dalhousie and Columbia Universities and at present Assistant Professor of Economics at Carleton College, points a critical finger at the Government's present price support programme for agriculture and fisheries.

A recent issue of *The Quarterly* drew attention to the activities of the Industrial Accident Prevention Associations. This fall, its Toronto-York section will be chaired by **E. G. Turner.** While Mr. Turner's own particular plant duties are concerned with fire and accident prevention, it is natural that he should be vitally interested in industry's part in civil defence. His article outlines the main phases of a programme of industrial security.

R. Gordon A. Galbraith, author of "Research in Transportation Advertising", is Vice President of Canadian Car and Bus Advertising Limited. Mr. Galbraith is intensely interested in advertising media research and its value to the advertising industry in general.

. . . . .

Aside from the promised discussion on "Lighting in Industry", by **J. D. Bateman,** Manager of The Lighting Institute, Canadian General Electric Company, the following articles will be forthcoming in future issues of *The Quarterly*: "Basic Motion Time Study", by **Ralph Presgrave;** "Control Over Reporting", by **James M. White;** "Employee Journals", by **J. L. Wild;** and "The Use of Salesmen in Making Collections", by **R. D. Selvage.**

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Conciliation and Arbitration

W. S. Lane

In this article, Judge Lane outlines the objectives of conciliation and arbitration, compares and contrasts the two processes, and finally treats specific questions relating to the adequacy of conciliation and the possibility and necessity of compulsory arbitration. He hopes to provoke continued thought and discussion concerning this significant subject.

MEMBERS of the boards which hear cases of conciliation may have a more thorough grasp of the machinery of the process than either management or labour, for they hear disputes, attempt to settle them, and, failing that, prepare reports on their findings. However, it remains with the individual parties to live with those reports. Boards of arbitration hear evidence and present their findings in much the same way as a court in an ordinary trial, but it is up to the parties concerned to carry out the rulings which result. Thus in both cases, the issues are far more real, pleasing or otherwise, to the parties than they can ever be to the tribunal which seeks to solve them.

It is the purpose of this article to review the spheres of conciliation and arbitration, discuss their similarities and differences, reintroduce specific fields of conjecture concerning the two processes, and perhaps stimulate constructive thinking and discussion on the part of those to whom their results are so vital.

History and Ultimate Objectives of Conciliation

Before embarking on a detailed analysis of conciliation, in the first place, one should remember the purpose for which it was established and examine some of its objectives. The general trend and intent of labour legislation has been to take away from management certain of the absolute powers which it has held traditionally over labour. This process has been a conscious process of our legislative bodies aimed at and intending to equalize the bargaining strength of management and labour. It may be that, in the view of our legislators, the pendulum has been allowed to swing too far in favour of labour. It is just possible that, as a result, they devised the conciliation machinery and set up the conciliation process, for it acts as a brake

upon the bargaining power of labour. It was a conscious change made by law and incorporated in labour legislation. It forces the parties where negotiation has broken down into the position of having a third party, in the person of the conciliation officer, attempt to bring them together, and if the matter still remains unsolved, of presenting their arguments and evidence before a conciliation board. The procedure is somewhat similar to the fact-finding boards set up by special order under the Taft-Hartley Law in the United States; but here, while the function is similar, it is in fact a required procedure and one without which no legal strike can take place. Many thinkers on this problem have agreed that the conciliation process was adopted for the purpose of evening the balance of power between management and labour. Of course, the only possible basis of this statement is that the union has been confined in its right to use economic force to the period following the decision and report of the conciliation board. This does *not* mean that biased decisions can generally be expected in favour of management from conciliation boards, although labour has sometimes unfairly taken this position.

Immediate Functions of Conciliation

Without conciliation, the parties would immediately resort on disagreement to the exercise of such economic power as might be available to the parties and as labour leaders might advise. The conciliation process is, without question, a process of delay to allow tempers to cool and to allow the reasonable attitude to prevail on both sides towards effecting a compromise. It is traditionally true that in any dispute if a party, or parties, can think the matter over at his or their leisure, he or they are less likely to lose his or their heads, as the case may be, and take some action which in the long run might very easily prejudice themselves as well as their opponents. A hot-tempered individual who would probably fight on a moment's notice, if suddenly angered, is very unlikely to fight if he has time to think the matter over. The same applies collectively. This is one of the basic points of thinking from which our conciliation procedure evolved. While this is true, it is by no means the modus operandi of that conciliation procedure. The cooling-off period is there, but it is equally true that once this period is past, any undue delay thereafter is likely to aggravate rather than to lessen friction between the parties. It, therefore, is of considerable importance that only the delays contemplated by the conciliation legislation should take place. The procedure should be carried out as expeditiously as possible.

The second important, contemplated function of the conciliation process is to try to get the parties together to work out settlements of differences between them. This, of course, is probably the most import-

ant function of the conciliation officer. It is his duty to clarify the issues in conference with the parties, to iron out such differences as exist if possible, and to effect agreement between them where that can be done. These, however, are also the functions of the conciliation board. To some extent, some of the same duties fall to the board. Its members must, in the first instance, attempt to get the issues thoroughly in their minds from a factual standpoint, with an eye to settling the issues between the parties, and on failure of settlement make a report. The board in question, after hearing the evidence, should be in a position to assess the factors involved in any given situation and to make such findings of fact as may be appropriate to the situation in hand. It is true, however, and a matter of compelling importance, that a board of conciliation should at no time consider that its major function is to hear the submissions of the parties and report its findings with its recommendations, because after all, this is its secondary and not its primary objective. Therefore, after hearing the submissions and before making such findings, the board, if it is properly carrying out its contemplated duties, takes on for the moment the complexion of a conciliation officer in attempting to get an agreement between the parties, if that is humanly possible.

In the operation of this function it has been my personal practice to call separate meetings with the parties. Usually I utilize the services of the company member of the board to sit in on my conference with the company, and likewise I invite the union member of the board to sit in on the conference with the union. These conferences and their success depend to a great extent upon the attitude of the party members of the board. They can by their support, in some instances, bring about an agreement. They can equally affect the situation adversely. Before suggesting these separate conferences, however, I assess the relative positions of the parties. If for any reason it appears that there is no chance of an agreement growing out of such a conference, I dispense with the separate meetings. It has appeared to me to be grossly unfair for the chairman of a board of conciliation to catch the parties off guard in these separate meetings, to have them alter their position, and then to utilize that changed position to formulate the basis of a report.

It goes without saying that the positions expressed in these conferences must form no part of the chairman's thinking insofar as the actual report, which may be necessary on break-down of the negotiations, is concerned. There is a saying in legal circles when dealing with matters of justice that "not only must justice be done, but it must also appear to be done". Therefore, no member of the board should be placed in a position in which it might appear that he had taken an

unfair advantage of either one or both of the parties. This discussion should point up the second point or purpose upon which the conciliation is founded, namely, the settling of the dispute, and prove that there are many snags to be found along this road, not only from the point of view of the parties themselves, but also from the standpoint of the board itself.

The third and final basis of conciliation is that the board will function as a fact-finding body and will report its findings and its recommendations. Those recommendations are based on what reasonable parties should be expected to do in light of all the evidence surrounding and concerning the dispute in question. This appears to have been to a great extent the function which is taken most seriously by some boards and which has formed to a great extent the basis of their work. In this function a number of considerations apply. First, it is the duty of the board in its own mind to decide the relative merits of the position of the parties. It secondly must assess the relative strength of the company and the union. It is in this aspect of conciliation hearings that we find the great difference between conciliation procedure and that of arbitration. It is, however, sufficient at this point to say that in an arbitration hearing there is no necessity for the board to take into consideration relative strength, because there the board is not concerned over whether or not the parties are relatively satisfied and will ultimately agree. The only concern of any such board is whether or not the decision is right or wrong. In conciliation, this question of strength is important because conciliation seeks an agreement between the parties themselves. The decision of the conciliation board and its recommendations must appeal to the parties, and whether we like it or not, that appeal is very directly related to the relative strength of those parties. However right a proposition may be, it would quickly be rejected by a relatively strong party. Therefore, while members of the board must assess the relative strength of the parties, it is done so that they may temper their recommendation not to be unfair to either party, but so that the recommendation will be sufficiently palatable to both parties that it may have some chance of being accepted. You will, therefore, see that each factor is important. Both lend a certain weight to the tempering of the other, and when they are considered from every angle and are completely analyzed, a board which does its duty should come up with a recommendation which will, in the net analysis, be in the interests of the employees as well as the employers. It will be in the interest of both parties, because that recommendation should embody a formula which will avoid strike action, if both parties are reasonable in their approach to the report.

Lastly, insofar as the conciliation procedure is concerned, it is essential that the form of the report be in as compelling language as pos-

sible under the circumstances. If a report is to be more than a pious hope, it must influence stubborn parties by its impact on what has been termed generally public opinion. How much this factor is, under our system, effective is a matter of conjecture. There is no doubt that conciliation procedure has been based upon the assumption that these reports would have an influence on public opinion, but I know of nothing that has ever been done, except in the very unusual cases where the matter is a cause celebre, to insure that the report received any publicity. This type of publicity is, of course, inadvertent and uncalculated. It may be that some step towards publicizing reports of boards of conciliation would improve our present system, because without the spotlight of publicity on these reports, the effect upon public opinion, which is so vital if they are to be anything but scraps of paper, is negligible.

The reports of boards of conciliation are not binding on either party. They are merely an expression of opinion by three men who have heard the arguments and evidence outlined to them by both parties; and while the discussion may have narrowed the disagreement, and the report of the board may have shown the parties that their position in certain points is not tenable, it has never been considered advisable to force the adoption of such reports. In fact, under present circumstances, and with our present point of view, that could not be. There is no doubt that there are people who are prepared to suggest that arbitration in some form of a compulsory nature should be made available to settle disputes which are now finally settled only by economic power, but no matter what position anyone is prepared to take on this problem, no one could suggest that the reports of conciliation boards could be made to bind the parties unless we at the same time change our whole thinking concerning conciliation. If this were so, and the process of thought were changed to make it possible, then the conciliation procedure would become arbitration, which is different in every way.

The Sphere of Arbitration

There is no question about the difference between conciliation and arbitration. The whole basis of thought and the process of the thinking of members of arbitration boards are completely different from the thinking of the members of conciliation boards. In the first place, at present arbitrations are confined to limited spheres. An arbitration board is appointed, in most cases, under the collective bargaining agreement in force between the parties. That agreement forms the basic law applicable to any dispute under it. The board's duty, therefore, is one of discovering facts, applying them to the agreement in

question, and relating its findings to the situation at hand by its decision. The process is very akin to the thought process of any judge in court. It is a matter of deciding a particular issue on evidence without regard to the feelings and the susceptibilities of the parties. In all cases, the decision is binding and the parties must abide by it.

Arbitrations usually arise out of a term of a collective agreement, with the possible exception of those cases on conciliation where it is found that agreement cannot be reached on some particularly knotty point, and where, to avoid a break-down, on rare occasions, the parties agree to submit the particular problem to arbitration. This is done by agreement, of course, between the parties, to finalize and settle the issue in question by an independent and binding decision. The reference to arbitration of such an issue may result at any stage of conciliation or may come about after the report of the board has been handed down and to avoid strike, or it may be a part of the settlement terms of a strike. The important point, however, is that it is always by agreement, and not otherwise. It is, therefore, obvious that in principle there is very little difference between arbitration on a grievance which arises under the terms of the collective agreement and the settlement arbitration which is arrived at by special agreement to settle a particularly difficult issue. The only exception which comes to mind is the resort to compulsory arbitration which became necessary to settle the railway strike. That reference was by act of Parliament, which forced the issue into arbitration and made the decision of the arbitrator binding on the limited issue which was referred to him.

It is also true that under the Police and Firemen's Acts of the Province of Ontario the right to strike has been taken away, and arbitration proceedings have been substituted as a means of settlement of disputes. It will be apparent that most arbitrations fall in the pattern of consent hearings to determine a specific point or points clearly defined, either by the reference or by the collective agreement, or by a separate agreement. Against this we have the very rare reference of matters to arbitration by special act of Parliament to settle particular difficulties, which very easily can be bracketed with the general reference to arbitration by general act of Parliament, which is given on a statutory withdrawal of the right to strike. In all cases, whether by agreement or by reference by act of Parliament, the decision of the board of arbitration or of the single umpire, whichever the case may be, is binding and final.

In conciliation one tries to bring parties to points of view which will approximate each other. In arbitration, there is no attempt or desire to change the point of view of either party; the merits of the

issue itself are the only guide to the decision, and expediency has no place.

Similarities in Conciliation and Arbitration

The procedure followed in setting up conciliation and arbitration boards is much the same in most cases, but of little interest here. Conciliation arises under legislation and is the last step devised to effect settlement before the parties are permitted to strike. Therefore, when any company or union finds that the two cannot agree, either have the right under the Act to request conciliation services. The conciliation officer acts as an intermediary between the parties and in many instances is able to settle the differences, but failing this, he may find it necessary to recommend that a conciliation board be established. Each party appoints one member to the board, and if they can agree on the chairman, the appointment is made on their recommendation by the Minister. If, on the other hand, it is not possible for them to reach agreement on a chairman, the matter is left to the Minister to make an appointment on his own motion. The board is supposed to convene as soon as possible, and under present legislation a report should be made within two weeks of the appointment. This requirement is absurd, although without question desirable. No board, except in the most minor dispute, can possibly deal with the matter and make a comprehensive report within that time limit. It becomes physically impossible when it is remembered that the members of the board usually are busy men, and it is very seldom that it is possible to get dates for the hearing within that time limit, without having any regard to the more important and more difficult matters which follow.

Contrast in Jurisdiction

The jurisdiction of the board is also governed by statute. The form of the hearing is pretty much in the hands of the members of the board, but the procedure before a conciliation board is usually rather fluid, or should be. On the more important conciliations, usually both parties are represented either by specialized lawyers or by other specialized individuals who thoroughly know their job. Briefs are submitted in most cases. These are followed by discussion and argument without, in most cases, too much attention to form. The whole matter is thoroughly aired in as informal a way as possible. Reports are made after the interviews described earlier in this paper.

This is in almost complete contrast to the procedure on arbitration. There the set-up of the board is similar, although there are instances where under collective agreements the matters are referred to a single umpire, but by and large most matters on arbitration go to three-man boards with party representatives and a neutral chairman,

either appointed by agreement between the parties or appointed by the Minister failing agreement. About 95% of all arbitrations are on collective agreements, a very small percentage, on other matters such as arise by agreement, out of conciliation or to settle a strike, as above outlined, and the balance by statutory reference.

The procedure here, however, while it is informal, is not a matter to be covered by briefs, although on occasion briefs are presented, but in those cases they are intended to serve as an outline or preliminary statement, and all important facts outlined in those statements must usually be proved by evidence sworn to at the hearing. The board must find facts and must render its decision on those facts under the terms of the reference, either in a collective agreement or in an outside reference. The decision of such a board is binding. Since this is a pioneer field, it deserves discerning thought. We are breaking new ground and construing documents relating to this field of labour relations. It may be that one chairman and one board will be prepared to decide a particular issue in one way, while another board some months later may decide the same issue in a completely different way. This is unfortunate and highly disturbing to the parties. I do not wish to be thought to be advocating any particular form of uniformity, nor do I wish anyone to interpret me as saying that one board of arbitration should be bound by the decision of another, but unless there is some uniformity which grows out of the decisions given, the result could be highly undesirable.

A Possible Forum for Appeals

For some two years, therefore, I have advocated that in industrial disputes' arbitrations there should be some forum to which an appeal could be taken. That forum could be set up by the Provincial Government for Ontario. It should be manned by three judges or more and at least two laymen representing management on one side and labour on the other. If there were no laymen, it is likely that the board would degenerate and become a formal Court of Appeal for Arbitrations, and that would be unfortunate; but such a forum would cure the contradictory decisions which our present system would seem to make inevitable.

Much of the mechanism and the necessary implications it would force upon us would need to be more carefully analyzed, but surely that could be worked out, and should be. This suggestion, however, does not go to the extent of requiring that every collective agreement or arbitration based on a reference be necessarily appealed to this board. The board should be available, and under collective agreements as they are amended and changed from time to time between the parties, the issue should be dealt with, and the question of whether or not the parties wish to avail

themselves of this suggested appeal board and make possible appeals in arbitration cases in their grievance procedure should be decided. If such a board were set up and gradually became acceptable to both labour and management, its use would surely grow, and its contributions in the field of industrial disputes could be incalculably great. In no case, however, should the use of such a board be forced, because were that done, the immediate reaction would no doubt defeat forever any possibility of such a board being a lasting factor in this field.

Adequacy of the Conciliation Process

There are two further matters with which we must deal. First, is our conciliation process as presently constituted adequate; and second, how far would compulsory arbitration be likely to stabilize our industrial scene? In dealing with the first matter, there is no question but that by process of time the function and effectiveness of the conciliation procedure has been changing. The attitude of the parties has contributed greatly to this change. In the first place, there is a tendency on the part of the unions to utilize conciliation as a hurdle to be passed, as an unwarranted interference with their right to strike which must be eliminated. The unions also have a tendency to utilize the findings of conciliation boards as another basis for furthering their original demands, and not to use the report of the board as a real basis for negotiation. While all this is true, it does seem to me that management has contributed considerably to the change. There have been many instances in which boards have made reports after very extensive hearings, in which the companies in question have painted very dire and dreary pictures of the prospects, even to the extent of claiming that were any particular increase to be granted, the company would be forced to close down; and yet, after the board has accepted the cry of "wolf, wolf!" that particular company, when the economic chips were down, has found it necessary to capitulate and pay a much larger amount in settlement of a strike than the board had recommended. It would seem that no honest company representative could take this stand conscientiously, because he not only is prevaricating before the board, but is also throwing into disrepute the whole conciliation procedure and making it impossible for recommendations of any conciliation board to have much chance of being accepted in the future.

There have been other instances when conciliation boards have made reports which are unacceptable to the companies, and when the companies have proceeded with negotiations after conciliation on the basis of their original position without regard to the report. This attitude likewise is not conducive to supporting and strengthening the use of the conciliation machinery. Taking the long term view of the situation, this attitude is not in the best interests of management.

From the practical point of view, the attitudes of both management and labour have had their impact upon the thinking of conciliation boards. In certain instances, in view of these attitudes, boards have tended to approach their problems in some instances obliquely. There have been instances, of course, where the decisions are unanimous and the amount of wage increase has, therefore, been set out in the amount that the board, guided by the thinking already described, felt proper. Where the decision of the board, however, is found to be a split decision, the attitude of the parties has seriously affected the results, for the dissenting member, if he be a labour representative, will usually recommend a wage increase far in excess of anything he hopes to get, and a company dissenting member will recommend a wage adjustment far below the amount he thinks is proper. Pressure, therefore, is usually put upon the chairman to agree to a recommendation which is below or above, as the case may be, the amount which he feels would be proper. In some instances he finds himself in agreement, because he realizes that if he recommends the figure that he feels is proper, the probable result would be an amount arrived at in negotiation which would be higher to some considerable degree than he could conscientiously recommend. In other words, the result of our approach to the problems of conciliation have in themselves become to some degree a jockey for position, which is indeed unfortunate.

There is no doubt, however, that in spite of these failures, some of which can be directly attributed to the parties, and others to the personnel of the boards and the conciliation machinery itself, conciliation is still acting as the cooling-off period and can still be utilized as a mode of moulding public opinion, if sufficient consideration is given to the reports of the boards of conciliation in these various disputes. If there were any real suggestions which could be made with regard to conciliation and its strengthening from the standpoint of management, it would seem first that management should make a concerted effort to settle all those issues which are not particularly important and to narrow the vital issues between the parties at some stage before the conciliation board is formed, so that when it meets it would have only the most important issues with which to deal. Often, nowadays, a conciliation board is expected to go over *all* the contract issues. This not only is a waste of time, but is not likely to gain the result that the parties should contemplate in arriving at an agreement, unless they themselves feel that they do not want an agreement and are merely going through the motions to befog the issue. It would seem that, in addition to settling all minor issues, representatives of management must never exaggerate their financial difficulties, but must be prepared to come before conciliation boards after honestly appraising their situation from all its aspects. After that appraisal, which should guide their decisions concerning what they are

prepared to do on any issue and under any eventuality, particularly in the case of strike settlement, they should be prepared at the conference with the chairman of the board to give a complete and frank statement of their position and stick to it. In that event, the ludicrous situation of the company claiming that a five-cent increase would lead to bankruptcy, and a month later granting a twenty-cent increase across the board, could not occur.

Compulsory Arbitration

Would compulsory arbitration contribute to stability in labour relations? This is, of course, an open question. Strikes are industrial warfare. All of us undoubtedly look upon warfare, either industrial or otherwise, as a catastrophe, and it does seem that some solution should be found which would avoid its paralyzing effect. Our society, however, has approved strikes insofar as they relate to local situations in which the individual union and the individual company are concerned. Society appears to disapprove of strikes when they become incidents of national importance, or even regional importance, probably because of the general inconvenience to the public. There is no question but that the railway strike, which tended to paralyze the whole country, in the opinion of the average individual, was far beyond the right of any union or group of unions to cause inconvenience for the public, that is the right in the sense other than legal. It likewise appears that it is becoming a matter of public reaction that strikes in public utilities which have a great impact on the public generally are a great infringement on the rights of the individual. Consider, for example, the fairly recent street-car strike in Toronto. The crux of the current thinking of the average individual seems to be that it is desirable that we preserve the right to strike in any dispute which has no significant impact immediately upon the general public welfare; where, on the other hand, a strike would immediately affect the public adversely, it is not to be tolerated for any length of time and must be settled. This public reaction is tending to affect our labour law and is becoming more and more one of the strong arguments in favour of compulsory arbitration to settle differences in public utilities at least. We have precedent for legislation which would accomplish this purpose in the Firemen's Act and in the Police Act. It probably cannot be argued that these groups have suffered by reason of the restriction of the cherished right to strike, but as yet we have not progressed enough towards civilized living in the labour field to feel that the principle involved in those Acts could be extended at this time. It may be that if we can provide a forum of appeal, as suggested in this paper, labour itself would in some future time accept arbitration, which could very well replace the cherished right to strike, as a solution for differences.

We are, it seems, as yet in the Middle Ages in our labour relations, and it would be probably fatal if we moved too quickly towards a ration-

alized thinking which would do away with the anachronism which seems to be present in the exercise of economic power to settle disputes. There is no doubt that, in the distant past, many civil disputes were settled by the power of the individuals involved, but over the years that has greatly disappeared, and the rule of law has been accepted pretty well in everything but labour disputes. If civilization is to progress, we will probably have to come to acceptance of law in that field, and it may only be a matter of time until that comes about, but if we are not to postpone that we must not move too quickly. Personally, I would not advocate any step at this time towards compulsory arbitration, but would attempt to establish confidence both from management's side and from labour's side in some proper arbitration system which would involve appeals as a step towards the ultimate goal of regularizing these relations.

The above are but some of the elements of conciliation and arbitration which today command the attention of bargaining agents and the boards which may intervene in the settlement of their differences. Knowledge and thoughtful consideration and understanding, on the part of all parties, of the various aspects of each factor will without fail contribute to success in bargaining and in settling disputes and should stimulate happy and fruitful labour-management relationships.

Industrial Design in Britain

Gordon Russell

Canadian business men will undoubtedly find this account of Britain's pioneering program in industrial design significant. Mr. Russell stresses the importance of this phase of industrial activity and demonstrates the possibilities of planned action with reference to the success of his country's Council of Industrial Design.

TWO world wars have profoundly altered Britain's place in the world and in the British Commonwealth. They have radically affected the whole pattern of its trade, and indeed the whole structure of its society. The necessity for greatly increased production in wartime and the quick switch to different kinds of goods highlighted the importance of technological research, just as acute wartime shortages led to intensive investigation of new materials.

The Need for Research

At the time of the first war it is doubtful whether many manufacturers in Britain — or elsewhere for that matter — realized that the ending of hostilities would not bring a return to what, in the pre-1914 era, was called normality. Many of their best customers, who had hitherto supplied Britain with food and raw materials in exchange for services and manufactured goods, had been forced to start manufacturing on their own account or go without essential things. Naturally, they wished to continue this policy in case a similar situation should arise again. It is not amusing to be deprived of one's boots! Exports from Britain tended therefore to take the form of capital goods, machinery and equipment for the new industries overseas, and high-quality consumer goods, such as fine textiles, pottery, and cutlery for the markets created by the increased pay of workers in such new industries. Consequently it is no wonder that research into scientific and technological problems, into welfare and personnel management, into business administration, marketing, and advertising, and into industrial design made great strides.

Why do I put industrial design last? Because, oddly enough, it was the last form of research to be taken really seriously. British manufacturers were naturally proud of the reputation for quality they had estab-

lished for their products, which were known to be reliable. In many cases, such as, for example, English sporting guns, they were admirably designed as well. To handle such things gave a thrill of pleasure which is not by any means common, even when articles are suitable for their purpose and well made of sound materials. It has now been realized that design, in fact, is a most important aspect of quality, and either Britain must make goods of high quality in the full sense, or, under the competitive conditions of today, she must go out of business. Moreover, good design is much more than solving an engineering problem in an efficient way, though that indeed is essential and is largely a matter for the head. Good design has the imaginative quality of the artist and therefore touches the heart too. However, unlike their Elizabethan forbears, Britons have grown to undervalue any signs of softness of heart almost as if it were softness of head.

A Move Towards Improved Goods

The second war underlined the stark fact that Britain would have to mobilize all her assets to win, and keep them mobilized to survive the peace. One of our greatest assets, which had been underemployed for a century, was the imaginative thinking of our artists and designers. The industrial revolution, headed by active and practical businessmen, had tended to overlook those assets which could not be expressed in a balance sheet. Of anything that savoured of art or design many would say, "Very nice, of course, but not business: we are in business to make money!" Now the moment a manufacturer admits that he is not primarily concerned, as a manufacturer, with making *goods,* he ought to do some mental stocktaking. His aim should be to make certain articles as well and as economically as he can, for, in the long run, he cannot maintain his position in the market by any other method, and he will then fully deserve the money he makes. Yet it is undeniably true that, in the short run, he may make more money by squandering goodwill. I remember listening to two business men who had just met in a provincial hotel. Said one, "What do you make?" The other replied, "Oh, since the war my company makes about £50,000 a year!", leaving the questioner with no idea whether he made cheese, bicycles, or toothbrushes. It was this type of mentality which, having convinced itself that the artist was not a practical person and had therefore nothing to do with industry, carried the argument a stage further by stating that ugliness was good business: "Where there's 'muck' there's money!"

Much of the 'muck' remains in our industrial towns — the revolting factories, the pinched housing, the lack of an ordered mind which sees life as an organic pattern. The interesting thing, nevertheless, is that the younger generation of British businessmen is well aware of the folly of this approach and, to an increasing extent, is calling in the designer to plan more effectively, to design more imaginatively.

The Formation of the Council of Industrial Design

A revolution in this as in other fields is occurring before our eyes and was envisaged by the enthusiasts who persuaded the Government to set up the Council of Industrial Design in 1944, when it was preoccupied with the concluding stages of the second war. When you come to think of it, this was an astonishing gesture, an example of imaginative pioneering. No other country in the world had set up a comparable body on such a scale, albeit modest when related to the terms of reference set down, which were none less than "to promote by all practicable means the improvement of design in the products of British industry".

If one were to attempt to list the steps he would take to reach this broad goal, he would realize that it is certainly an extremely challenging order, for British industry is not only extremely varied and complex but has traditions built up over centuries in the home market, and in European countries, and for long periods with almost every other country in the world. Traditions should be a source of inspiration and strength to all engaged in the industry, but care must always be taken to ensure that tradition does not become a cramping factor, an excuse to justify the childish point of view that any change is bound to be for the worse. On the other hand, a virile tradition can give a powerful check to the revolutionary who blandly assures one that any change is certain to be for the better!

How, then, has this job been tackled? The Government decided not to make the Council of Industrial Design a Government department but to give it the greater freedom of a grant-aided body responsible to the Board of Trade. This means that those comprising its staff are not civil servants and therefore have an advantage in talking to industrialists, especially at a time when the Government was bound to administer many unpopular controls.

Then it was decided to appoint a Council of twenty-four, most of whom should be well-known and respected industrialists. This was a courageous step, as it was by no means easy to find such men who also had a sound knowledge of industrial design. It must also be remembered that in 1944, when the Council was set up, almost all the well-known names in industry were those of men already deeply engaged in war-work and hopelessly overloaded. It was largely owing to the public spirit and sense of urgency of those manufacturers who consented to serve that the Council of Industrial Design was taken seriously from the beginning by industry. Especial mention must be made of the first Chairman, Sir Thomas Barlow, then Director-General of Civilian Clothing, who as Chairman of the great Lancashire cotton firm of Barlow and Jones and of the District Bank combined great prestige in industry with an astonishingly wide knowledge, acquired over many years at first hand, of indus-

trial design problems, painting, and sculpture. He has a great knowledge of the work of Albert Dürer, on which he has written several books. Such men are rare, but there were others, like Lord Bilsland, Chairman of Bilsland Brothers and The Union Bank of Scotland; Sir Ernest Goodale, also a weaver and Chairman of the Royal Society of Arts; Dr. R. S. Edwards, then a Director of the Co-operative Wholesale Society and now Chairman of the North Eastern Gas Board; Leslie Gamage, Vice Chairman and Joint Managing Director of the General Electric Company; Sir Charles Tennyson, Secretary of the Dunlop Rubber Company; Josiah Wedgwood, Chairman and Managing Director of the famous pottery firm and a Director of the Bank of England; and P. G. R. Whalley, a Director of Lewis's Ltd. There were also well-known designers and educationists.

Such a Council naturally saw the extreme importance of building up a staff whose senior officers, at any rate, possessed three outstanding qualities: firstly, a knowledge of industrial design; secondly, first-hand experience of industry and sympathy with its problems; and thirdly, tact in its widest sense, which always implies a friendly man whose breadth of vision leads him to suppose that there is more than one possible solution to most problems.

Activities of the Council

The Council was convinced that the improvement of design standards was industry's own concern and that any attempt to impose designs, except in special cases of grave scarcity and then only as an exceptional wartime measure, would be certain to fail. In this case, it would inevitably set back the very work it intended to forward, for unless any firm is convinced of the importance of improving design standards, its employees will not put their hearts into the job. They may even determine to prove that an imposed design cannot be sold, at some cost to themselves. It should be realized, too, that a manufacturer by himself, unless he is selling a branded and nationally advertised product, relies to a considerable extent on the active cooperation of the retailer. An approach to the manufacturer, the retailer, and the public must be made simultaneously by such a body as the Council of Industrial Design. Such success as the Council can claim has been made possible in several ways.

The Council has approached the public on a great scale through exhibitions of well-designed products, such as "Britain Can Make It" in 1946, "Enterprise Scotland", 1947, and the Festival of Britain, 1951, for which the Council was responsible for selecting all the industrial exhibits, nearly 10,000 of them, ranging from locomotives, aeroplanes, and machine tools to wireless sets, cups and saucers, and fishhooks. These, together with over fifty small exhibitions staged by the Council and seen

by about fourteen million people, and a series of "Design Weeks" in nine of the largest towns have made the public "design conscious" in quite a new way.

These activities have been followed up by courses on design for retail store staffs, exhibitions in shops, and special approaches to important service trades, such as printing.

The Council has also attempted a direct approach to manufacturers, to Trades Federations and Chambers of Commerce. In 1951 an International Congress on "Design Policy in Industry as a Responsibility of High Level Management" was oversubscribed. The Council has an exceptional knowledge of this subject and is often called on for advice. It keeps a Record of Designers, from which it can recommend suitable people for many kinds of design work. It can also call on lecturers, and recommend photographers whose knowledge of the subject enables them to combine successfully well-designed objects from different trades.

The Council magazine, "Design", is regarded as one of its most important activities. This is addressed primarily to British manufacturers, but it has proved of no less value to designers and to many retailers, for it brings each month design information from all over the world. In about four years its circulation on subscription has been built up to that of many trade journals, and at the present moment its circulation abroad is increasing even more rapidly than at home.

This is certainly encouraging, for the problem of improving design standards is one which no firm, no trade, no country can solve on its own. It is exactly the kind of job in which Britain can and should give a strong lead, more especially to Commonwealth countries. Britishers cannot claim for one moment that they have all the answers, because they have been doing something which has never been tackled on this scale before, even in the Scandinavian countries, which have made great advances over the past twenty-five years. However, they have a great deal of experience which might prove of considerable value, even under very different conditions, and ought to take a real interest in what is happening in this matter among our customers. If Britain's future lies in selling really high quality goods, then the more critical its customers are the better. They will be all the less likely to be fobbed off with inferior articles.

Education in Design

There is another aspect of the problem in which the Council of Industrial Design takes the closest interest, and that is education. Broadly, it is true to say that visual education has been sadly neglected in schools all over the world. This is due to some extent to the failure to realize how important a part of education apprenticeship was in the days of hand work. In a good workshop a young man was made very conscious

of high standards of quality and was constantly encouraged to look and to compare. Moreover, in communities from a village upwards he was surrounded by small workshops; he saw work being carried out and so did the customer when he went to buy. Quality could be explained to him in a way that is impossible in a retail store of today. In many houses weaving, baking, jam-making, and other such domestic crafts were commonly practised, and the most valuable part of many people's education came through the skilful use of their hands.

The wars have shown us the immense value of such work in many cases of illness, and to an increasing extent its value in education is leading to its much wider use in schools. The child who has not been taught to use his hands at all is often quite without any real sense of quality, and the boredom of many of the repetitive phases of mass production leaves him with a sense of frustration. The Council of Industrial Design has worked with the Ministry of Education and with local authorities on various experiments in visual education in schools, in adult education colleges, and in the training of the individual designer. For the first two, the Council produced a series of design folios. These were large photographs in series of twelve, each dealing with some object in common use, teapots, cutlery, chairs, etc., together with a short account of their development and of design points to be sought. Over two thousand schools subscribed for these. Film strips, small box exhibitions, cheap booklets, exhibitions and lectures at educationists' conferences, etc. have all proved of value.

In the long run, the most potent form of visual education lies in sending children to schools which are architecturally good, set in good surroundings, pleasant in colour, and equipped with well-designed things. In this most valuable humane development England is acknowledged to be leading the world. Visiting architects are determined to see the best of our new schools whatever else they may miss. The use of fine old houses as adult education colleges in Britain is likely to have a considerable effect on public taste in the years ahead. Some counties have handled this side of education with great imagination, and here again the Council of Industrial Design has been able to collaborate with them to the benefit of both.

I have always insisted on the importance of holding any Council courses in a good setting. This is a matter which is all too often overlooked. Good design is indivisible. If you believe in it at all you cannot see any excuse for not applying it everywhere. A manufacturer who thinks he can apply it to his products but not to his vans, offices, factory canteens, letterheads, and so on, is making a great mistake. Until it becomes a habit of mind he will not get really good design in his products.

Then there is the training of the industrial designer, which has suffered a great deal from the split in what is labelled "art" and "technical"

education. The original theory was probably that art schools ought to be interested in what a thing looked like, and technical schools, in how it was made. This fatuous idea ignored the plain fact that how a thing is to be made, for what purpose, and of what material must profoundly affect its appearance. The industrial designer has become necessary because of the complex subdivision which machine production makes necessary. Yet it has not been unusual, until quite recently, to train him in methods suitable for hand production only. Consequently, his status has been low, his pay poor, and his influence far lower than that of the engineer, the architect, the accountant, or the advertising consultant. This is the case in other countries apart from Britain, where, since the end of the last war, a school of university status — the Royal College of Art, founded in 1836 — which should hold its own with any school of its kind anywhere in the world, has been built up. There are now ten schools in the College — Ceramics, Textile Design, Fashion Design, Metal Engraving, Silversmithing, and Jewellery, Wood, Plastics, and Metal, Architecture, Graphic Design, Painting, Sculpture, and Engraving — in the charge of professors whose own work as designers or artists commands ardent respect. There are also three smaller departments — Industrial Glass, Stained Glass, and Interior Design. The equipment of the College has been completely overhauled, and its links with British industry have been strengthened at every point of contact. Not only can, say, pottery students see at the College the whole method of industrial production in this trade, but each one spends much of his time actually working at one of the great potteries at Stoke-on-Trent, seeing industry's problems at first hand. Then, on his return, he comes in contact with architecture, painting, and sculpture, as well as students training in trades other than his own. It may be that here again Britain can be of very real service to the Commonwealth, not in training a great mass of designers but in training the highest talent in the most imaginative way. It is the quality of imaginative thought which goes into a design that matters; one first-rate designer is likely to have far more influence than a hundred inferior ones.

A Challenge for Better Design

There are no doubt many Canadian manufacturers who have come up against situations similar to those described. A much more intelligent use of the machine is one of the greatest problems facing the West if we believe that a really high standard of living cannot be attained by pay-packets alone. Britain pioneered the Industrial Revolution which made possible a new way of making goods by the power of steam. America has developed the technique of mass production. No country has yet succeeded in producing beautifully as the rule rather than the exception. This is not only a very great social service but for Britishers is the best form of good business which can be undertaken.

Industry's Part in Civil Defence

E. G. Turner

Much as we may dislike it, we live under the threat — sometimes remote, sometimes urgent — of a renewal of world-wide war. The experiences of World War II, indeed of recent Korean bombings, illustrate clearly that industrial establishments must be highly concerned about this threat. Mr. Turner suggests several responsibilities of industry arising from this situation and some of the courses of action its leaders may take to fulfill them.

EVEN the most incurable optimist must surely pause in a reflective mood as he contemplates the irony of our day, that having reached the highest point in civilization, we have at the same time acquired the most efficient means for its wholesale destruction.

Whether one looks for the sudden advent of the Civil Defence Red Alert — "Bombs any second" — or for a protracted era of continuing crises in the cold war, a charge of responsibility is laid at the door of our established business institutions to entertain at least some degree of defence preparation in their present and future planning. Surely it is only taking a realistic view to suggest that in contemplating Canada's admittedly phenomenal industrial growth, a growth which by all accounts presages a dazzling future within the next decade, we must build within its warp and woof some concrete defence measures which will be calculated to give it at least an even chance of survival should physical destruction threaten its existence.

European and American Preparedness

On the European continent, prior to the last war, months and years were spent in preparation for the eventualities of air attack. The thoroughness or otherwise of such preparations can best be judged with a knowledge of the fact that the people had no precedent or blueprint to guide them for effective defence measures during the devastating raids to which they were subjected. We know now, however, that, in spite of all their preparations, when the raids attained their fullest ferocity there was an all too general lack of cohesive authority and a dislocation of services in the various communities, with resulting confusion and disorder which gave the impression of inadequate advanced planning.

Indeed, in the primary stages of the raids, this confusion engendered a great deal of verbal revolt and discontent. Yet in spite of the terrible destruction of the cities of England and Germany in the early years of the war, the *full* realization of the havoc that can be brought upon a country by such raids became apparent only when attacks on populated centres assumed the devastating proportions of the saturation-bombings of German cities and the atom bomb destruction of Nagasaki and Hiroshima.

England and continental Europe now appear to be picking up where they left off a mere seven years ago in defence preparations for and by their productive factors. Generally speaking, European industry views the possibility of sudden crises in what one American terms a "relaxed attitude" not as much for lack of any appreciation of the extreme gravity of the situation as because of traditional calm born of long experience in preparing for emergencies.

In the United States there exists a mixed reception and reaction. It would appear at times that the whole printing bureau in Washington was working overtime to bring out exhortations and warnings of impending disaster and instructions regarding means to prepare for it. Many industries started with grandiose schemes of civil defence at the outset of the Korean hostilities, publishing action pictures of their crews in various defence workouts and stimulating a lot of temporary enthusiasm. However, there appear to be few who have to date done much in a really concrete manner to plan their industrial defence measures on a long-term or permanent basis.

Moves Towards Canadian Defence

In Canada we are very much concerned (and rightly so, perhaps) with the complex problems of industrial administration which plague our younger, thriving, industrial economy. We award first place to the contemporary problem of industrial and public relationships, and are spending phenomenal amounts of time and money in a seemingly desperate effort to effect a solution to this perplexing problem. Actually such are largely abstract problems in comparison to the very real and concrete threat with which industry must deal — the problem of its place and function within the framework of Canada's national defence efforts.

The Canadian Manufacturers' Association has evidenced tacit admission that industry must give some recognition to the problem. General Worthington of the Federal Office of Civilian Defence has addressed certain sections of its annual meetings, but in the time allotted has been able merely to submit a very general outline of the problem. Then, too, his listeners have been, for the most part, junior executives in industry. These are the men who, in their normal line of duty, would accept and prosecute the functions of civilian defence measures, but are in no sense capable of formulating the overall policy without which all they have

learned through lectures and defence brochures carries no weight and is inoperable. For the guidance of industry, a few pamphlets of a general nature have been issued to date; while within the Provincial framework of civilian defence, industries have had the opportunity to send delegates to Federal or Provincial schools to take courses in theoretical and practical subjects related chiefly to matters of very general interest. To date, no practical courses, which are specifically for the guidance of industrial concerns, are operating.

Industry feels it lacks any *definite* direction from the proper political or military authorities in concrete or practical measures of civilian defence, and so finds itself today, with few exceptions, not even in the fundamental stages of planning or organization for civil defence measures. In times of active international crises we rightly charge our Government with the responsibility of recruiting, training, and equipping sufficient man power to guard against predatory attacks of an enemy by land, sea, or air routes (and in the past the three arms of national defence have amply sufficed to protect and maintain a degree of security within and around the framework of our civilian—and industrial—economy). The Government could not possibly, from the standpoint of man power alone, attempt to train and equip armed forces to protect every phase of our civilian life. In addition, there may be reluctance on the part of the federal authorities to introduce any regimentation into the industrial phase of our economy, even in this regard.

What has been for Canada a somewhat obscure and little tried *fourth arm* of a defence economy, namely, that of *civilian defence,* is one in which industries must take an active part and which they must accept as a new and very real responsibility.

If we are to assess European experience in this regard, it would not be right to say that England or the continental countries placed the main weight of responsibility upon industry to maintain the structure of civilian defence within their respective communities. England and Sweden, in particular, have given specific direction to industrial concerns to prepare for their part in civilian defence, and one can presume that by now they are well aware of their particular responsibilities in the general pattern of their country's defences. In England and Germany, during the war, there were government agencies, peculiar to their own economic systems, which operated on a national basis. In England, for instance, the "National Fire Service" and "Home Guard" organizations did much of the work and were charged with much of the responsibility which individual industry would be expected to assume in Canada. In our country the distances between the target areas alone would work as a serious detriment to such organizations (as a cohesive force, at any rate). It would appear that individual industrial concerns will assume a degree of responsibility which heretofore has not been the case.

The Nature of Industrial Responsibility

When seeking a sound basis on which to establish the organization of civilian defence, it is only natural to examine institutions which already occupy a leading place in the economy of the community and exert a marked degree of influence on its daily life.

Most industrial concerns already have a peacetime industrial defence organization functioning within their plants, though it might not be termed as such. They employ personnel for the specific duties of security and fire protection, while maintenance men are continually employed against the ravages of rust and wear and tear on buildings and machinery. They are staffed by mature men who have years of experience in dealing with the dual problems of material and man power and accept as routine problems sudden emergencies which they must quickly get under control in order to maintain production.

The complex problem facing any individual industry in Canada in planning and organizing for the protection of its personnel and equipment in the event of a national crisis carries with it the knowledge that within the framework of such an organization it has a threefold responsibility: (a) towards the local community, (b) towards its own employees, and (c) towards the company itself. Just how can these three responsibilities be best discharged by industrial concerns?

Community Responsibility

In all stages of civil defence, before, during, and after a raid, the morale of the population will be affected to a large extent by the degree of leadership and practical help that industrial concerns can give to a community.

Since local municipal organizations must depend on volunteer help to subscribe to long hours in organizing and training men and women for the arduous work of civil defence, it is not to be wondered that, except in areas where men with experience in top military or industrial organizational tactics offer themselves, local political appointees or volunteers are making little headway.

Industrial concerns need to exercise care, therefore, that they do not perfect their defence plans to the exclusion of, or out of step with, those of the municipality. Generally speaking, although the individual concern is considered as self-supporting in an emergency, it is a part of the chain of very essential communications and utility services on which the whole community has a call. It was noteworthy that both in England and Germany the closest kind of cooperation existed between the local factories and the community, in comparison with the mutual aid which was extended between other agencies such as transportation and fire organizations and the higher political and military units of the country, in some cases, to the exclusion of local municipal commitments.

In a peacetime disaster which might overtake an industrial concern, a pact of mutual aid between local industries might be envisaged and would be extremely beneficial, but disasters affecting the community as a whole would naturally relegate such mutual assistance plans to a degree of secondary importance. An industry could draw up a very efficient scheme of defence, making it self-sufficient for its own purposes, but it must plan to function equally as well, and indeed accept greater responsibilities than ever, should the community be half destroyed and half of its inhabitants listed as casualties. It is in such cases as this that an industry, if it is well organized, could well render more assistance to the community than it would feel called upon to ask for itself and could materially assist in alleviating distress and disorder with its man power and material resources.

Temporary facilities for shelter and feeding can often be afforded by plants which, due to their blast resistant structure, would not suffer anything like the damage which would occur in weaker residential edifices.

In telephone or traffic breakdowns which habitually bedevil an industry, money and effort are not spared to bring pressure upon the proper authorities to effect the quickest possible remedial measures, while maintenance men, trouble shooters, and stock and traffic expediters work feverishly to assure the quickest possible resumption of production schedules. Yet in a disaster affecting a community, a firm would be ill advised if it were to exercise its influence and put exorbitant demands or loads on utilities already strained to breaking point or perhaps not even functioning.

In many instances an individual plant's processes or combustible stocks of raw and finished goods could severely overtax the community's fire defence system and, tragically enough, could make all the difference between saving or losing a community. In such cases the industry has a heavy burden of responsibility to ensure that it has an independent fire protection system and separate water supplies which could lighten the load of this extremely important branch of civilian defence.

Perhaps the most effective aid that could be rendered would be the organization by all the industries of a "task force" of men and women placed at the service of the community to assist in any given capacity.

The foregoing industrial emergency services, given to a common community effort, could assist tremendously in restoring a degree of normalcy to a stricken community. It is in such cases as this that an industrial concern's public relations can be pushed to a "sky's the limit" objective by a factual yet self-effacing demonstration of what industry is able to do for a community in time of disaster.

Responsibilities to Employees

It has been stressed by many authorities that to the degree that employees of an organization are made aware of the company's plans for disaster-control, the company may expect their cooperation in planning and maintaining a good civilian defence organization.

It is natural that any concern would think of the welfare of its employees as a primary responsibility in any defence measures, and to this end it would seem advisable for industrial concerns to appoint members of labour organizations to sit in on the plant planning committees. These men could do much to stimulate interest among fellow employees.

No effort should be spared in ensuring the employee's shelter, welfare, and job security. These affect his morale to a considerable degree, and although he may be inclined to appear selfish in his demands in matters concerning his personal welfare, the employer will need to exercise a marked degree of patience and tolerance.

Serious dislocation of work schedules will be encountered under disaster conditions. Problems of job seniority, job transference, and job remuneration will be very much in evidence. As he probably will be facing more serious social dislocations at home, the employee will be very discouraged and uncooperative unless welfare plans, aimed at rapid rehabilitation, are planned.

Industries which have been through such emergencies stress the policy, "Put him to work cleaning up or give him some degree of responsibility in reestablishing families in the community who are in similar distress." Nothing will restore an employee's morale as much as a clean and orderly place in which to work. A good illustration of this was apparent in the plan of many British firms, who, rightly guessing that the retention of their employee's morale was a fundamental need under blitz conditions, made prodigious efforts to pay their employees on time, even if the plant had been bombed the night before. A factory whistle defiantly blasting "Starting time as usual" midst a scene of destructive carnage is indeed encouraging.

Many employees will be injured in varying degrees or perhaps crippled to the extent that they cannot report for work for several days, if ever again. The normal procedure in such cases would be to drop such employees from the payroll, and employ substitutes. In this situation some marked degree of flexibility must be considered in order not to add to their personal troubles, and an industrial welfare force should be organized to follow up such cases and keep personal contact as long as it is feasible in an endeavour to ameliorate their condition.

Perhaps the greatest responsibility in this regard for the industrial concern is to keep the plant going by every means at its disposal. When

there is the remotest possibility of carrying on with a skeleton staff and operations, it should be done. It could indeed be shattering to the morale of any workman to see a sign conveying the information that his plant was closed, even for the shortest possible period to effect repairs. We suggest, however, that a great deal of wisdom should be displayed in selecting a skeleton work force drawn from those ranks of employees who are in greatest hardship.

Here, too, understandably selfish considerations on the part of the employees regarding pay for unscheduled work or down-time will need to be met. Most European companies paid the employee's normal average wage for any time spent in the plant after a raid, regardless of the type of work to which he was assigned. This, besides restoring to some degree the employee's monetary status, worked to the advantage of the firm itself by helping to retain an efficient labour force in a time of an obvious man power shortage. In the recent flood disaster in Kansas City a few firms set up a special flat rate for all rehabilitation work. As far as pay for a pre-raid training time is concerned, no certain pattern was obtainable on the Continent. In some instances in large British industries, employees reported back to the plant after an eleven-hour shift and a half-hour "tea break" for a further two to four hours' defence training without pay, while others paid the standard rate and charged the account as deductible expenses for income tax purposes.

The welfare committees of labour organizations can be expected to assume some practical interest towards their members' rehabilitation, but this could in no sense be construed as lessening the firm's responsibility, if for no other reason than that the union is sustained by the employees' own contributions. This points up the case, however, for close cooperative effort between management and labour bodies seeking fair distribution of welfare benefits to avoid duplication and overlapping.

The immediate after-effect of all these measures should be, if nothing else, a cementing of employee-management relationships. Fellowship in adversity cannot help but generate spontaneous good will. Radio and telephone contacts with factory staffs, with messages of condolence or assurance to the bereaved or anxious relatives, can do a great deal towards a feeling of camaraderie under trying conditions.

Some industrialists may feel that the foregoing measures detract from the employee's own self-reliance. The writer does not feel that we should jetison any part of the plan of the employee's safe welfare for this consideration. While there will always be individuals who will look for personal considerations far in excess of their merits, the whole scheme should not suffer in its over-all application on this account. No measures should be overlooked which will tend to fortify the workman with the knowledge of his own responsibilities.

Responsibilities to Themselves

In this section we need only enlarge on what was intimated in a previous paragraph. All governments at home and abroad are unanimous in their assertion that the primary responsibility for protection of industrial concerns rests upon the owners or operators of industry themselves. The interpretation of civilian defence as "self help" could nowhere be more aptly applied than to the section of our economy which rightly boasts that it incorporates within its four walls the best and most efficient organizational plans and exists by exacting measures of self-sufficiency and economy. Surely we need only add to the foregoing the need for haste and for skill in improvising with such tools as are at hand to effect good measures for civil defence.

Certain factors naturally should guide industry in deciding whether it should adopt measures of civil defence. A manual recently issued to English industry by the "Home Office" lists the following considerations: (a) the liability of air attack on the area in which the plant is located, (b) the degree of inherent hazard or risk in the particular manufacturing processes and materials, (c) the size, type, and layout of plant or buildings, and (d) the location and availability of mutual or outside help. Obviously it would be virtually impossible to give minute individual directions to any given industry or industrial process for adequate defence measures, as too many factors of building construction and layout are used even in allied industries. The responsibility of each unit must be considered from the standpoint of a general application of the requirements of civilian defence in industry.

Each industry should appoint a committee of senior executives to represent management in the formulation of the broad policy governing civilian defence plans. They in turn would delegate authority to a planning committee to administer these policies in a practical and efficient manner.

Broadly speaking, the management committee functions would include: (a) establishing a liaison with the local Civil Defence Coordinator and local industries and appointing a delegate to sit on the advisory board of the Municipal Defence Committee, (b) establishing policies relating to the fire-fighting, warden, security, and first-aid services of the plant, (c) organizing damage control, resumption of production, and replacement of critical machinery, (d) surveying the whole property, listing specific hazards relating to building structure and manufacturing processes, and (e) keeping an up-to-date inventory of all fire, first-aid, and rescue equipment available for emergencies.

The planning committee would be responsible for instituting adequate training measures for all personnel engaged in the protection of the plant.

There is a danger that some well-equipped and well-staffed plants will feel that long familiarity with production breakdown problems over the years leaves them in a good position to meet any emergency. Nothing could be further from the truth, because the devastation wrought by the havoc of bombing calls for measures of debris clearance and rescue of personnel and temporary means of resuming production in which no Canadian plant can claim to have any experience.

There are obviously some training procedures which industry is normally not prepared to undertake. In these cases, particularly in such measures as rescue of personnel, shoring up damaged building sections, etc., men should be selected who could receive special training along the lines of their own particular skills (electricians, steel erectors, carpenters, etc.), and they in turn could train other personnel.

It is not planned that there will be any large municipal shelter accommodation which will be sufficient for all eventualities. Therefore industries and large office buildings with basements are expected to use them, provided they meet at least some fundamental requirements.

We do not anticipate "round-the-clock" bombing schedules which were the pattern of the last conflict and which necessitated the occupancy of shelter areas for long periods at a time, but even if we entertain the fact that more destructive single raids will necessitate plans for "one-time" shelters, these should afford a good measure of protection and should be prepared in advance. The following factors govern shelter selection and preparation: (a) any inner wall area or corridor below the top two or three stories of a structure, with a minimum of glass exposure, (b) a safe distance from the possible hazards of steam pipes and high voltage electrical installations, (c) not under heavy machinery installed on upper floors unless additional shoring is installed, (d) well marked and readily accessible entrances and exits, (e) stocked with supplies of battery lamps and first-aid supplies, and (f) preferably in areas which will not force personnel to run outside.

Since in many factories certain operations will render it impossible for the operators to hear air raid sirens, supplementary air raid warning signals will need to be installed to ensure proper and safe evacuation of personnel.

Each industry should provide the best possible protection for its critical machinery at least. This applies especially to power-house equipment or process machinery, the loss of which could seriously cripple a plant's production.

In the case of large single-storied buildings, which usually operate in straight line production and so have no intervening walls or partitions, fire walls should be erected and carried up over roof areas to form fire parapet walls. Such measures could restrict any outbreak of of fire to an area where fire fighters could control it effectively.

While some brochures on civilian defence advocated the dispersal of industrial activity after the last war as a result of the Nagasaki and Hiroshima devastation, such measures are considered today to be more idealistic than practical. It would be too much to expect that our peacetime economy should operate, to this extent, at any rate, upon a pattern predicated on wartime necessities, if for no other reason than that the dislocation of markets, labour supply, and transportation would prove too great a strain for normal competition in industry.

Certain plants with critical manufacturing processes under Government control may follow this procedure, but the motive would be one of security rather than long range economy.

In the categories of either raw materials or critical machinery replacements, industry's responsibility is one for which there is no easy solution.

Large and poorly protected piles of raw materials could create irretrievable losses if kept under one roof, as experienced in the loss of multimillions of pounds of crude rubber during the early stages of the last war. Financial ability to purchase or the degree of scarcity of certain commodities would also govern measures of stock protection. The four main classifications of stock piling are: (a) raw materials which are basic to the national economy or defence, especially such imports as oil, sugar, coal, and steel, (b) building materials, such as shoring timbers and sheet and structural steel, used to replace or reinforce damaged structures, (c) replacements of critical machines or their components, and (d) civilian consumer goods, durable or otherwise.

If we consider a victim of temporary or permanent amnesia to be an object of pity, then we can surely adapt the illustration to a plant which has lost all its plant records through the ravages of either fire or water. These are the perishables of any business, but not by any stretch of the imagination, the expendables. The need here is for positive planned action, yet not so hastily devised as to entail oceans of work, headaches, and exorbitant cost.

Before entering any scheme of record protection, very careful consideration should be given to the two main phases of the plan, namely, *what* to protect, and *how* to protect. Simplicity is the keynote of any such plans. Otherwise large plants will find that they will be involved in large

expenses, especially if the procedure is to operate with a long-range view. British authorities had excellent results from the system they devised. Their plan centred upon the three principal methods of duplication, dispersion, and vaulting, and many American concerns who had grandiose and costly schemes operating during the last war are now adopting the British plans.

After a raid the multiple responsibilities of an industrial concern in resuming production are such as are calculated to try the cleverest minds and skills of organized industry. British and German plants learned early in the war that the need to keep production going at all costs was vital for obvious reasons.

Even with fairly large sections of the plant put completely out of action, these areas were walled off and protected against the weather, and production loads were shifted to other sections of the building with a celerity which in many instances bordered on the miraculous. Clean-up operations for debris should be undertaken immediately after a raid; in many cases after this is done the damage is not nearly as bad as feared.

Demolition, clean-up, salvage and repair of machinery, and restoration of buildings are the four main steps for any program in resumption of production after a raid.

Some European industrialists seriously question the ability of the North American people to manifest a quick recovery after sustaining raids of the severest nature, resulting in dislocation and destruction of their utilities, services, and social life. Personal courage is not so much in question here as our collective mode of existence. Except for the immigrants of recent years, the Canadian and American people as a whole are not inured to the hardships of everyday existence which have been the lot of the European people for decades, and on the same plane, our industries, except in local areas which have been subjected to natural disasters, have never been called upon to display their ability to absorb the fury of enemy action and effect the quickest recovery when their plants have been reduced to a shambles.

The responsibility of industrial concerns in this instance is plain, in that a careful inventory needs to be taken of their *moral* as well as *physical* assets. Strong-minded individuals, whose emotional stability, even if temporarily staggered, will suppress tendencies to panic or defeatism, must be selected to offer leadership.

Industry can never afford the luxury of an apathetic attitude. In visualizing all the implications of civil defence in the target areas of our provinces, our responsibilities toward the stricken community, our employees, and the defence of our own physical and mental assets offer a concrete challenge which we cannot easily evade.

Government Price Support Policy

H. S. Gordon

How valuable are price supports? H. S. Gordon, Assistant Professor of Economics at Carleton College, expresses serious doubts as to their usefulness in this analysis of the Agriculture and Fisheries Price Support Acts of 1944.

AMONG the various economic and social policies currently pursued by the Government of Canada, the policy of supporting the prices of agricultural and fishery products represents one of the more drastic departures from a free market economy. Yet this policy has been subjected to relatively little public discussion and criticism in Canada. One of the reasons for this is that the evaluation of price support policies quickly leads one into the intricate realms of technical economics. Another is that Members of Parliament in opposition have voiced no substantial criticism of these policies, probably for the same reason that no opposition is forthcoming to *any* of the Government's expenditures for economic security and social welfare.[1] Yet price support policies, in their present form, are questionable in their operations. The purposes they are expected to serve are usually very vaguely defined and it can be shown that the price support method is incapable of meeting the objectives that its proponents frequently set for it.

When the price support legislation was being considered by Parliament in 1944, the opinion most frequently expressed both by the Government and its supporters, and by members of the Opposition, was that price supports were a necessary part of easing the transition from a wartime to a peacetime economy. This was even incorporated in the titles of the Acts,[2] but the nature of this transition problem was not indicated in any specific terms either in the Acts or during the debates in Parliament. In point of fact, farming and fishing experienced *less* dislocation as a result of the war than many other Canadian industries. Production

[1]The principal criticism of the Government's floor price policies advanced by Opposition members and Government supporters in a recent parliamentary debate was that the floor prices were *too low*. (House of Commons Debates, May 12, 13, 14, 1952.)

[2]"An Act for the Support of Agricultural Products during the transition from War to Peace" and "An Act for the Support of Fishery Products during the transition from War to Peace". The Acts originally had a limited existence but they were put on a continuing basis by an amendment passed in March, 1950.

capacity was not tremendously altered. In farming, the war hastened the trend of population away from the land — a movement which was in accord with a better adjustment of agriculture to the rest of the economy and in line with the general trend of Canadian economic development. In the fishing industry the war helped to accomplish a similar desirable shift and to break down some of the traditional opposition of Maritime fishermen to technological advances. The problems of the "transition period" were of less importance in agriculture and fishing than in some of the young Canadian industries that experienced a mushroom growth during the war and which had good reason to expect serious marketing problems in a peacetime economy.

Background of Legislation

The real reasons for the passage of price support legislation go back to the years *before* the war. Farmers and fishermen faced very serious economic difficulties during the depression decade of the 1930's and widespread fear existed that these conditions would return when the artificial stimulus of war was removed. It must be remembered that economists and others in the United States were freely predicting a general recession for the early post-war period. In the minds of primary producers the problems of the depression era were generally associated with low prices. During the war, Government control of prices through the Wartime Prices and Trade Board achieved some considerable degree of success, and it was repeatedly argued by The Canadian Federation of Agriculture that this justified and demonstrated the feasibility of price control measures of the support type.[1] There is some evidence that this contention, although specious, exerted weight in Government circles. The Prime Minister announced the Government's intention to introduce price support legislation in a radio address entitled "The Battle Against Inflation" (Dec. 4, 1943) in the following words:

> "If to help win the war, the farmers are asked to accept a ceiling on prices, we believe they are entitled to a floor under prices to insure them against an agricultural depression after the war. As an essential part of its post-war policy, the Government intends to ask Parliament, at the next session, to place a floor under the prices of the main farm commodities."[2]

An auxiliary factor was that primary producers were, for administrative reasons, excluded from Unemployment Insurance, which had been instituted early in the war as a combined anti-inflation and social

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[1]Drummond, W. M., "Objectives of an Agricultural Price Support Policy", *Canadian Journal of Economics and Political Science,* August, 1951.

[2]*Federal Agricultural Marketing & Price Legislation, 1930 to 1950.* Department of Agriculture, Ottawa. November, 1950, p. 40. Price support legislation for fishery products was initiated more or less as an afterthought, reflecting the fact that, the political influence of fishermen being weak, the strongest basis for any plea on their behalf is the provisions available to farmers.

security measure. Price support was envisaged by some as an income-maintenance device for farmers and fishermen comparable to unemployment insurance for urban wage-earners.

Work of Price Support Boards

Since their inception in 1944 the two Boards have engaged in a number of price support actions. These are detailed in Tables I and II.

TABLE I

AGRICULTURAL PRICES SUPPORT BOARD ACTIONS, 1946-1951

Commodity	Date	Area	Source of Difficulty	Method of Support	Disposal of Commodity	Cost to Board
Potatoes	1946	P.E.I., parts of N.B., Que.	Crop too large	Purchase of unsold amounts	Increased exports, diversion to starch	$ 171,000.
Potatoes	1948	P.E.I., part of N.B.	Crop too large; loss of export markets	Purchase of unsold amounts	Left with farmers	1,647,000.
Apples	1947	Nova Scotia	Reduced export sales	Purchase by Board	Relief, charitable institutions	3,119,000.
Apples	1948	Nova Scotia	Reduced export sales	Purchase by Board	Sold in domestic and export market	1,443,000.
Apples	1948	British Columbia	Large crop, reduced export sales	Deficiency payment	——	45,000.
Apples	1949	N.S. and B.C.	Impending loss of U.K. market	U.K., purchase subsidized by Board	——	1,500,000.
Beans	1949	Ontario	Reduced export sales	Purchase by Board	Relief - Palestine	194,000.
Butter*	1949 50, 51	Canada	Fluctuating supplies	Purchase by Board	Sold in domestic market	1,408,000.
Skim Milk (dried)	1949	Canada	Reduced export sales	Purchase by Board	Relief	11,000.
Cheese	1949	Canada	Reduced export sales	Purchase by Board	Sold in domestic market	158,000.
Honey	1949	Canada	Large crop, reduced exports	Purchase by Board	Sold in domestic and export market	177,000.
Eggs	1950, 51	Canada	Reduced export sales	Purchase of unsold amounts	Sold in domestic market	——
Canned Pork	1951	Canada	Crop too large; reduced exports	Purchase by Board ($22,000,000)	In Board's possession, March 1952	?
						$9,873,000.

Sources: *Federal Agricultural Marketing and Price Legislation, Canada, 1930 to 1950.* Department of Agriculture, Ottawa, Nov. 1950. *Annual Reports, Agricultural Prices Support Board,* Ottawa.

*Prior to April 1, 1949, support of butter prices was administered by the Dairy Products Board.

TABLE II

FISHERIES PRICES SUPPORT BOARD ACTIONS 1946 - 1951

Commodity	Date	Area	Source of Difficulty	Method of Support	Disposal of Commodity	Cost to Board
Canned herring, mackerel, cod & related species	1948	Atlantic Coast	Loss of market (UNRRA)	Purchase on quota basis	Relief; charitable institutions	$1,145,000.
Frozen lake fish	1949	Manitoba	Reduced export to U.S.	Purchase of unsold amounts	Diversion to fish meal and feeds	265,000.
Salted codfish	1950	Newfoundland	Reduced export sales	Purchase of unsold amounts	Relief; diversion to fertilizer	83,000.
Hair seals	1950	Quebec	Decline in markets, poor quality of commodity	Deficiency payment	———	5,000.
Salted codfish	1951	Newfoundland	Reduced export sales	Deficiency payment	———	1,219,000.*
						$2,717,000.

*Estimated.

Source: Annual Reports, Fisheries Prices Support Board, Ottawa.

The Agricultural Prices Support Board was voted a working fund of $200 million, while the Fisheries Prices Support Board received $25 million. The Boards were permitted to purchase commodities at designated prices or to pay a "deficiency payment" (amounting to the difference between the actual price received and a designated support price) directly to the producers. In the great majority of cases in which support has been given, the chief cause of the difficulty was the loss of an export market in a soft currency area. This emphasizes the importance of healthy international trade and finance to Canadian primary producers. In most cases, exchange stringency was the root cause of the difficulty. The total cost of the programme for agricultural products up to March 31, 1952 was $9,873,000.[1] For fishery products the cost was $2,717,000. The great bulk of these expenditures is accounted for by actions in respect of potatoes, apples, butter, pork, canned Maritime fish, and Newfoundland salt codfish.

The Agricultural Prices Support Board has adhered fairly consistently to the method of purchasing the commodity at a designated support price. The principal difficulty which arises from this method is

[1]This includes only the direct actions of the Agricultural Prices Support Board. Activities of a similar nature have been undertaken by some other agencies of the Department of Agriculture. This figure also does not include the cost to the Board of supporting pork prices in 1951 since the product has not yet been disposed of. The cost to the Board is expected to run to some $10 millions.

that the Board is faced with supplies of which it may not be able to dispose. The potatoes purchased in 1948 had to be left with the farmers themselves for disposition, on the understanding that none would be marketed commercially. The support of 1951 pork necessitated canning the product to permit storage. The Board's purchases amounted to $22 million. None has yet been marketed and heavy net losses are anticipated. In most other cases, however, the Board succeeded in disposing of the commodity in an acceptable fashion.

The experience of the Fisheries Prices Support Board with the knotty problem of commodity disposal has been quite unhappy. The Board noted, in respect of the 1949 Newfoundland codfish supplies:

> "The disposal of the fish presented the difficulties usually associated with marketing of distressed products, particularly as the Government had undertaken not to make sales at sacrifice prices in markets normally open to the trade."[1]

Disposal of some products at nominal charges for relief purposes even encountered difficulties and, as a result, the Board's recent actions have employed the method of deficiency payments, allowing the producer to market the commodity for whatever it would bring and paying him a calculated amount per unit sold from the Board's funds.

APART from the claim that price support is necessary as part of an orderly transition from a wartime to a peacetime economy, two general aims are usually associated with the policy. The Acts establishing the two Boards give as their objectives, the achievement of "adequate and stable returns for agriculture (fisheries)" and "a fair relationship between the returns from agriculture (fisheries) and those from other occupations". These statements, although vague, appear to indicate that the primary aim of the legislation is to stabilize and to raise[2] the incomes of primary producers. The objectives have broadened somewhat from this strict interpretation and several of the actions of the Agricultural Prices Support Board have had somewhat different and perhaps wider purposes. Recently, Mr. J. F. Booth, Chief of the Economics Division of the Department of Agriculture, argued that price support should be considered "as but one part of a varied programme designed to achieve a progressive economic development and a measure of stability consistent with that achievement".[3]

The various objectives and purposes that are held for price support must be made a good deal more specific and concrete before an evalua-

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[1] *Annual Report, Fisheries Prices Support Board, 1950-51.* Ottawa, p. 8.

[2] It is a just assumption I believe that *raising* incomes is the true objective. No one talks about a "fair share" who does not think that the object of his concern receives too little.

[3] Booth, J. F., "The Canadian Agricultural Price Support Programme", *Canadian Journal of Economics and Political Science,* August, 1951.

tion of them is possible. The remainder of this article will attempt to discuss and evaluate these objectives in such concrete terms.

Under the heading of "stability" the principal aim of price support is, as noted above, the stabilization of producer incomes. Two other stability aims are, however, also present: the stabilization of prices and the stabilization of production volume. These three are, of course, all interrelated, although not always in such a way that the stabilization of one factor is consistent with the stabilization of another.

Stabilization of Production

Any effort to stabilize the volume of production of a particular agricultural or marine commodity must recognize the fact that instability may be due to a number of different causes. Production may alter as the result of natural factors (which are particularly important and relatively uncontrollable in farming and fishing); it may be the result of a general economic movement or trend (a depression, a shift in consumer demand, etc.); or it may be due to a change in the price of the product in question.

While production fluctuations due to natural factors are matters of considerable importance in farming and fishing, it is unlikely that such output variations could be significantly reduced by price supports. It is true, of course, that the relative influence of natural factors may be reduced by a greater use of capital equipment, and price support provisions may encourage greater investment in such capital, but the effect could hardly be of any substantial magnitude.

The response of agricultural and marine production to general economic fluctuations or trends is rather *more* stable than that of other industries. Indeed, the difficulties of farmers and fishermen have been aggravated by the lack of response in production to a decline in general demand or a shift of demand to other commodities. In some cases, governmental agencies have paid agricultural producers to persuade them to reduce or abandon a line of production that had lost its economic foundation. It is difficult to see what useful purpose would be served by price supports designed to maintain or stabilize production under such conditions. Only when a production surplus is expected to be of a short-term nature can a useful purpose be served. In such cases the temporary surplus is stored and resold when a shortage materializes. This has been in fact the principal aim served by the butter support programme. The Agricultural Prices Support Board actually made a profit on its purchase and sale of 1950-51 butter. It is difficult to resist the conclusion, however, that such occurrences are the result rather of good luck than design. How does one know that a production surplus is temporary and will be followed by a shortage?[1] Indeed, the very existence of price supports

[1]The method employed by Joseph in Egypt is not available to government economists, although there is to my knowledge at least one office in Ottawa that possesses a Ouija board.

makes it less likely that a shortage will subsequently develop because it reduces the incentive (low prices) for producers to cut production.

Production fluctuations which result from price fluctuations are particularly interesting occurrences, forming part of the so-called "cobweb theorem" of economic theory.[1] The production of certain commodities, particularly in agriculture, takes a considerable length of time. Once production plans are made and put into operation they cannot easily be altered. If a large number of producers make their production decisions on the basis of present prices, sharp alternating fluctuations in production and price may result. When prices are high producers begin a heavy volume of production. When that production comes to market, the large supply depresses the price. Producers begin a much reduced production volume and so future supplies are small and prices high, and the cycle is gone through again. The hog production cycle is a well-known example of this phenomenon. Price supports may help to dampen the magnitude of such cycles by limiting the price movement in the downward direction. The principal difficulty with such a programme is that it requires support prices to be at a fairly high level and to be set quite far in advance, for the main purpose is to effect production *decisions*.[2] The potato production and marketing experience of the past few years appears to indicate that the kind of support policy implemented in Canada had little effect on alternating production-price cycles.

Stabilization of Prices

Occasionally, the aim of price support policy in the creation of "stability" is defined as if stability of *prices* was itself the objective. The type of price fluctuations which is the counterpart of production cycles of the "cobweb" type are subject to the same comments as were made above, so no more need be said here. Sometimes, however, the point is raised that the prices of food products are more vulnerable to general economic fluctuations than other commodities. The prices of agricultural and marine products fall farther and faster during depression than those of, say, manufactured goods. This is due to the unresponsiveness of the supply of food products to reduced demand. The demand for food products itself is less responsive to a general decline in incomes than other products; so the difficulty comes principally from the supply side. Agricultural and marine producers cannot lower their overall production under such conditions because production is carried on by many individual autonomous producers. For each producer *individually,* a higher income is derived by producing more; thus the welfare of the individual becomes incompatible with that of the group as a whole. The point is frequently made that in manufacturing and other industries,

[1]See Ezekiel, M., "The Cobweb Theorem", American Economic Association, *Readings in Business Cycle Theory.*

[2]See Booth, J. F., *op. cit.*

which are in a more organized and less individualistic state, combined decisions to lower production and maintain prices are possible. Therefore, it is argued, the farmer and fisherman should get similar benefits through a Governmental price support programme.

Price supports would hardly reduce production, however, and hence the objective of price stabilization would not be reached by adjusting production to lowered demand as is done in other industries. The Government support agency would simply become a purchaser at the support price and would face the problem of disposing of the commodity in some acceptable way that did not depress the market further. What, in effect, would happen is that the production of primary producers would be subsidized jointly by consumers who pay higher prices and the Government.

The stabilization of prices under conditions of general decline is highly questionable. It reduces the action of one of the economic variables which is responsible for making the adjustments necessary in such a situation. When the price decline is the result of a fall in demand that will not return, price stabilization would merely slow up the shift of resources to other industries and the result would be perpetuation of wasted resources and effort. It is unlikely that price supports could stabilize prices unless they were placed at a high level, and if this were done, their effect on the economy would undoubtedly be undesirable.

There is one circumstance in which a price support programme might effect a desirable stabilization of prices. Under certain conditions, a sharp decline in the price of one commodity might lead to speculative buying and selling of others. The disorderly marketing which may result could have undesirable effects on the industry and be detrimental to the interests of producers. In such a situation, the use of price support by a Government agency may, with a relatively small amount of expenditure, prevent undesirable speculative action which could become very wide in its influence. The announcement of the support of egg prices by the Agricultural Prices Support Board in 1950-51 was perhaps a case of a potentially speculative situation which might have led to a sharp fall in prices if it had not been for the psychological effect of the announcement.

Stabilization of Income

Let us turn now to a consideration of the stabilization aim which is of *primary* importance as an objective of price supports — the stabilization of producer incomes. Discussions of this objective are usually accompanied by as much vagueness and confusion as those of the other stability objectives. A principal reason for this is that in the minds of some proponents, price support is expected to stabilize incomes at a prosperous level, while others regard it as a guarantee of a *minimum* income which, presumably, would be infrequently experienced. The former idea lies

behind the long discussion of "parity prices" that has taken place in the United States, and it was the basis for most of the criticism recently levied at the Government's floor price programme for meat by Opposition members in the House of Commons.[1] The idea that price supports should guarantee only a minimum income is based on a social security principle similar to that on which unemployment insurance and old age pensions are founded.

The principal difficulty that is encountered in meeting this objective — whether it be a guarantee of a high or only a minimum income — is that price is only one of the factors that determine the income of a primary producer. A large production sold at a low price may bring more than a small one sold at a high price. Any price support that was tied to price formulas such as has been suggested in the discussion of parity prices might result in Government support of prices at a time when producer incomes were relatively high and no support when they were relatively low.

Price Support as Social Security

In this connection it is useful to note that price support has an important general deficiency as compared with the more usual methods of social insurance and security. The latter usually attach the benefits to the particular individual who experiences the need. The person who receives unemployment insurance is the one who is unemployed; the person who receives workman's compensation is the person injured. This important principle does not apply in the case of price support. The benefits are received by broad groups of producers, without regard to individual need. Since the amount of the income subsidy received is determined by the volume of the individual's production, it necessarily follows that the larger producer receives the larger subsidy. To the extent that the subsidy is borne by food consumers in the form of higher prices, the net effect of price support may well be to shift income from low income groups to those already receiving higher incomes.[2] This argument may carry less weight when the commodity is exported, for then a part of the consumer's portion of the subsidy bears on foreigners, but that does not affect the logic of the case.

The fact that benefits are not attached to individuals under a price support scheme also means that the method is a costly one in comparison to the benefits received by income recipients. In evaluating the efficiency of an income-subsidy policy, a logical criterion to employ is that the cost of the programme to those who pay the subsidy should exceed the bene-

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[1]House of Commons Debates, May 12, 13, 14, 1952.

[2]Johnson, D. Gale, "The Role of Support Prices in a Full Employment Economy", *Canadian Journal of Economics & Political Science,* August, 1951.

fits received by recipients by as little as possible.[1] A price support policy does not measure up to this criterion very well. The cost to Government may greatly exceed the benefits of recipients if the support agency actually acquires a sizeable amount of the commodity and does not succeed in finding a satisfactory outlet for it. The deficiency payments method avoids this difficulty but, like Government purchases, it gives the greatest amount of subsidy to the largest producers.

In considering price support as a social security device it is interesting to evaluate it against the principles of social insurance that Sir William Beveridge put forward when he made his famous report on the British social security system in 1942.[2] As the first of his three "Guiding Principles" Sir William noted that a successful system required an overall design, not just a haphazard patching together of bits and pieces. Secondly, a social security scheme must be treated as part of a comprehensive policy of social progress. Thirdly, the state and the individual should *cooperate*; the individual should receive benefits for contributions as of right, not merely handouts from the public treasury. Price supports clearly offend against all three of these principles. They are not an integrated part of a comprehensive social security scheme; even at best they are mere "patches". They are rarely, if ever, employed as part of a general programme of social progress. They are received not as a right, founded on specific contributions, but as a handout, based primarily on political pressure.

In general then, it appears that price supports, whether of the deficiency payment or purchase type, are clumsy methods of subsidizing or insuring the incomes of primary producers. It may well be that farmers and fishermen cannot be included under unemployment insurance as it is now constituted, but there is no reason why it should be impossible to establish a contributory minimum income insurance scheme for primary producers under which direct benefits would be received by the individuals experiencing the difficulty. In short, in this writer's opinion, nothing is achieved by price support measures in the form of income maintenance or insurance that cannot be done better by other means.

Other Difficulties

If we accept at face value the statement in the Price Support Acts that the Boards should seek to achieve "a fair relationship between the returns from agriculture (fisheries) and those from other occupations", some additional difficulties are raised. Phrases like "a fair share" or "a fair relationship" are fundamentally propagandistic in nature: they compel assent without meaning anything. Proponents of price supports

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[1]This is the reverse of a criterion of taxation efficiency: that the tax should yield to government an amount as close as possible to that which it costs the taxpayer.

[2]Beveridge, Sir William, *Social Insurance and Allied Services*, p. 6.

and other measures for the aid of primary producers frequently make comparisons of the share of these producers (or a group of them) in the national income at two dates seeking to establish the point that the share of the group has declined. The ethical foundation of such an argument is plausible, but not really acceptable for a country like Canada. The principal characteristic of the Canadian economy at the present time is that it is undergoing rapid change and development. As new areas are opened up, new resources discovered and exploited, new technical innovations made, it is inevitable that the share of a particular group in the national income will alter. As Canada becomes more industrialized the relative importance of primary production will decline. If we seek to prevent this from occurring by Governmental measures, the only effect will be to hamper the dynamic development of the economy and all Canadians will be poorer as a result.

This argument applies, with only a small reduction in weight, if it is held that what is meant by a "fair relationship" is that the *average* incomes of farmers and fishermen should be comparable with those of other groups. In an economy where individuals are free to choose their own occupations, dynamic forces exert their influence through the operation of the pricing mechanism and its effects on producer incomes. If the trend of the economy is towards greater industrialization, the human resources of the nation must undergo a relative shift from primary production to industry. How can this shift be induced to occur if the average incomes of primary producers are deliberately maintained at levels comparable with those received by others? Once again we become aware of the fact that the price mechanism is the essential organizational vehicle of a modern economy. If the Government interferes with its functions, it must be prepared to substitute direct Government planning and control as an alternative mechanism of economic organization. The present Dominion Government has, I think, begun to experience this fact, for in many spheres of the nation's economic life it has had, almost against its own desires, to take over the functions of organization and control which were formerly performed by the operation of market prices. Some of these developments were probably unavoidable, but others were not.

To conclude: in this writer's opinion, price supports are clumsy substitutes for social security which could probably be provided to farmers and fishermen by better and more direct measures; the desirable functions which price supports may perform are minor and indeterminate in nature while the interference with the price mechanism which they involve represents a hampering of the fundamental organizational system of the modern economy for which, at present, there is no satisfactory substitute in use.

Research in Transportation Advertising

R. G. A. Galbraith

Mr. Galbraith's presentation of the positive aspects of research in the transportation advertising field adequately supports claims concerning the value and importance of validated advertising research made by Mr. J. A. M. Galilee in the Winter 1951-52 Issue of The Quarterly.

The selection of the "right" advertising medium to do the "right" advertising job is increasingly important.

Because all phases of advertising costs have increased over the past few years, advertising budgets are frequently overstrained to maintain the volume of advertising deemed essential to the successful marketing and promotion of consumer goods and services. As a result, advertisers and advertising agencies are today placing extreme emphasis on (1) the study of the product to be marketed to disclose its uses and where and for whom it should have a sales appeal, and (2) a study of the characteristics of the various advertising media to discover which seems most suited to carry the advertising story to the characteristic people for whom the product has the logical sales appeal.

Factors Governing Efficient Media Selection

These two analyses, along with the ultimate comparisons of the product's requirements with the facts disclosed about the various media, frequently result in the selection of media which might otherwise have been overlooked. Also, a medium which might have been favoured may be discarded for good, sound reasons. Common sense dictates that a magazine, for instance, whose circulation is made up of 'teen agers, would be a thoughtless place to advertise products whose appeal would be to elderly persons. By the same token, if a product is to be sold to city residents, it is senseless to advertise it in a farm paper. If the product's sales appeal is to the great mass of city residents, both men and women ranging from twenty-five to fifty years of age and in the middle income bracket, then the characteristics of those reached by the medium selected to carry the advertising message should correspond as closely as possible. Otherwise money will be wasted and results will be conspicuously lacking in success.

Neither advertising agencies nor advertisers like to take the risk of recommending or selecting an advertising medium about which they may have a good "hunch" but little in the way of proven facts to support their feeling. The lack of proven facts also precludes the possibility of matching an advertising medium's qualifications against an advertising campaign's requirements. Should an advertising agency recommend a medium, unsupported by proven facts, to a client, the agency frequently must put forth extra effort to win its acceptance. On the other hand, if proven facts about a medium are available, the agency recommendation is then completely understandable and its logic appreciated.

It is apparent then that both the advertiser and the advertising agency are at all times eager and anxious to have as much useful information about each advertising medium as possible. They want to know the size and characteristics of the circulation of every medium. They want to know if it is rural or urban. Does it reach men and women? What percentage of both? How frequently? What age groups? What economic levels? What percentage of housewives? And, of the utmost importance, they want to know what percentage of this circulation *reads and remembers* the advertising displayed through the medium, preferably broken down by various classifications within the circulation.

It follows, then, that the advertising medium supplying the required type of information is in a much better position to be considered than those which fail in this respect.

Early Attempts to Secure Information

In the years prior to 1947, it was the practice of Canadian Car and Bus Limited, which is engaged in selling transportation advertising, to supply as much of this information as possible by conducting its own ridership and readership studies in various cities. The investigations were carried out by private research companies whose work was technically and conscientiously above reproach. The printed reports published the exact findings, and yet, as so often happens with this type of research, regardless of the medium being studied or the character of the research company doing the work, there were some "doubting Thomases" who said that "only the findings favourable to the medium were published and the unfavourable ones were suppressed." The tragedy of this is that good, honest findings are occasionally ignored because of the ill repute of the questionable ones.

Much money has been spent and much time devoted to the planning of similar research. In many cases, the whole result has been a waste of money and effort, simply because some impartial group acceptable to advertisers and advertising agencies alike did not set the standards for the research, hire members of the field organization, and check all the

findings before permitting the medium to publish them for its usage. Obviously, such an arrangement would tend to increase the cost of research to the advertising medium, but the real value lies in the fact that the research would then be validated by a group acceptable to the selectors and buyers of advertising. Thus while the cost for validated research tends to be higher, there is a saving in the long run because it is accepted and used without question. No longer can the medium be suspected of slanting any of the findings or of printing only the facts favourable to the medium.

The Adoption of Validated Research

The ideal people to set research standards for and to validate the findings of transportation advertising studies were the very people who ultimately were to use the information in assessing it. In June of 1947, representatives of the medium proposed to the Canadian Association of Advertising Agencies and to the Association of Canadian Advertisers that they jointly sponsor an advertising research foundation in Canada similar to the Advertising Research Foundation in the United States, whose function it is to develop media research standards and techniques, to supervise field investigations, and to validate the findings.

An advertising medium wishing to have a study conducted by the Advertising Research Foundation makes formal application and in so doing agrees to publish all the facts disclosed by the research. The medium pays the entire cost of the research. If the application is accepted by the A. R. F., a Project Committee is then set up. The Committee is tripartite in that it is equally composed of representatives of the American Association of Advertising Agencies, the Association of National Advertisers, and the medium to be studied. The medium representation on the Committee can always be outvoted by the agency-advertiser combination, and its purpose on the Committee is largely to supply the other representatives with media information and materials in order to expedite the study. It is noteworthy that *The Continuing Study of Transportation Advertising* has been operating in the United States since 1944. To date, the A. R. F. has studied fourteen cities. The report of a study in Los Angeles will be released in the fall of 1952.

After due deliberation, the Association of Canadian Advertisers and the Canadian Association of Advertising Agencies decided to mutually sponsor a Canadian Advertising Research Foundation whose aims and objectives would parallel those of the Advertising Research Foundation in the United States. Transportation advertising was the first medium to be accepted for study by the newly-formed body. *The Continuing Study of Transportation Advertising in Canada* was set up in 1948, and Winnipeg was the first city studied. A tripartite Transportation Advertising Project Committee was appointed with equal representation from

the Association of Canadian Advertisers, the Canadian Association of Advertising Agencies, and Canadian Car and Bus Advertising Limited, and C. A. R. F.'s activities were under way.

Technique of the Validated Research Studies

Four cities, Winnipeg in 1948, Montreal in 1949, Vancouver in 1950, and Toronto in 1951, have been studied, with the result that there is now available to advertisers and advertising agencies alike qualitative information about the ridership and readership habits of the transportation advertising audience. This information is validated and impartial and is therefore an acceptable basis on which the medium can be measured against the requirements of an advertising program.

The purpose of *The Continuing Study of Transportation Advertising,* as set forth in its four reports, is as follows:

1. To determine the general characteristics of the transportation advertising audience of a given city or transportation area according to age, sex, economic level, frequency of riding, and other pertinent data.

2. To measure the number of people (fifteen years and older) proved to have seen a specific advertisement one or more times during a thirty-day period and to project that audience in its exact ratio of the population of the city or transportation area.

3. To supply general information about the riding habits, including such data as frequency of riding, length of ride, frequency of changing cars or buses, adequacy of seating facilities, and distance from home to the nearest transportation line.

The research technique used in the transportation advertising studies is the "controlled recognition method" of interviewing. Limitation of space will not permit more than the following summarized description of this procedure. Each study consists of the examination of a separate city and requires a minimum of 1,200 personal interviews within that city. Two sets of interviews are conducted, one before the test cards have been displayed in the transit vehicles, and the other after the display. In the pre-examination interviews, each interviewer is supplied with a kit of car cards, some of which have already appeared in the local transit vehicles and some of which are to be used in the test. In addition to obtaining basic facts about the person interviewed, such as age, sex, and riding habits, the interviewer displays each card individually and asks whether the interviewee remembers seeing it. The tabulated replies to the pre-examination interviews provide a measure of error in identification which serves as a control on the results of the second set of interviews.

After the test cards have been displayed for one month on a half-service in the transit vehicles of the test city, the cards are removed, and

the post-examination interviews are conducted, the interviewers using kits containing the group of test cards and others which have not been on display previously. The tabulated scores of the post-examination interviews are corrected by the pre-examination results to obtain a minimum audience for each test card.

Another innovation used in transportation advertising studies is the "precision sampling method". Beyond limited stratification based on census data, the selection of interviewees is removed entirely from the discretion of the interviewer, who must follow a predetermined course from an assigned starting point regardless of subjective factors. As a consequence, the results obtained from the sample may be projected to the entire population of the surveyed area. The significance of this feature is explained in the printed reports:

> "Interpretations, heretofore impracticable with the data available on advertising media, can now be founded on reported audiences of transportation advertisements. The facts that the audiences are proved in size, and are calculated on a sample which accurately parallels the size and distribution of the population in the study areas, are the fundamentals on which the interpretations rest. Thus, it is possible to relate the number of readers to actual dollars and cents costs, to contrast individual advertisements one with another, to analyze results in different cities, and to make other comparisons."

Any advertiser may apply for inclusion in a study, but, because of interview limitations, the number in each study is limited to twelve. Each advertiser making application must agree to run an 11″ x 21″ car card on a half-service display basis for one month. The advertiser's choice of illustration and copy material is subject to the Foundation's approval, and he cannot use a card which has ever appeared before in the survey area. If he has used the medium previously, he must change his copy style to minimize possible confusion. Finally, he cannot use the same copy or theme in any other medium serving the area immediately before, during, or after the test display.

Findings of the Continuing Study

A summary of the findings from Canadian Studies Nos. 1 to 4 inclusive with respect to transportation habits and patronage of the various transit systems is presented in Table I.

The corrected readership scores, obtained by properly relating the pre- and post-examination scores, are applied to the basic population of the test city to obtain audience figures for each test card. Because the percentage of riders in the basic population is known, the audience may also be expressed as a percentage of riders. A summary of the readership data obtained from Canadian Studies Nos. 1 to 4 inclusive is presented in Table II.

TABLE I

	No. 1 Winnipeg, Manitoba Nov. 1948	*No. 2 Montreal, Quebec Oct. 1949*	*No. 3 Vancouver, B.C. Nov. 1950*	*No. 4 Toronto, Ontario Nov. 1951*	*Four-Study Averages*	*Weighted Averages**
Patronage:						
Basic Population (15 years and older)	245,000	1,020,000	425,000	875,000		
Per Cent Riders	88	79	85	81	83.3	81.5
Sex: % men riding	86	82	80	75	80.8	79.7
% women riding	90	76	91	87	86.0	83.6
Age: % 15-29 riding	94	84	87	83	87.0	85.1
% 30-44 riding	86	78	83	79	81.5	79.9
% 45 and over riding	84	73	85	82	81.0	79.1
Rent: % upper quarter riding	85	74	84	72	78.8	75.4
% second quarter riding	90	79	87	80	84.0	81.7
% third quarter riding	92	81	88	85	86.5	84.6
% lower quarter riding	87	80	81	80	84.0	83.6
Riding Habits:						
Frequency of riding:						
Sex: 5 round trips a week and over						
% men	62	60	43	43	52.0	51.5
% women	32	28	29	32	30.3	29.9
2-4 round trips a week						
% men	15	13	19	13	15.0	14.2
% women	38	30	31	26	31.3	29.6
1 round trip a week or less						
% men	9	9	18	19	13.8	13.9
% women	20	18	31	29	24.5	24.1
Age: 5 round trips a week and over						
% 15-29	55	52	44	48	49.8	49.6
% 30-44	43	43	38	34	39.5	39.1
% 45 and over	41	33	29	31	33.5	32.4
2-4 round trips a week						
% 15-29	24	19	22	14	19.8	18.3
% 30-44	26	23	21	20	22.5	21.9
% 45 and over	31	23	30	25	27.3	25.6
1 round trip a week or less						
% 15-29	15	13	21	21	17.5	17.2
% 30-44	17	12	24	25	19.5	18.9
% 45 and over	12	17	26	26	20.3	21.1
Frequency of riding:						
Rent: 5 round trips a week and over						
% upper quarter	40	40	31	28	34.8	34.4
% second quarter	50	48	40	37	43.8	43.1
% third quarter	54	44	39	43	45.0	43.8
% lower quarter	44	41	34	42	40.3	40.5
2-4 round trips a week						
% upper quarter	27	22	26	16	22.8	21.1
% second quarter	27	20	26	18	22.8	21.0
% third quarter	25	20	23	20	22.0	21.0
% lower quarter	28	24	23	24	24.8	24.2
1 round trip a week or less						
% upper quarter	18	12	27	28	21.3	20.5
% second quarter	13	11	21	25	17.5	17.6
% third quarter	13	17	26	22	19.5	19.8
% lower quarter	15	15	24	22	19.0	18.9
Number of changes of vehicles:						
% of riders staying in 1 vehicle	52	34	55	38	44.7	40.6
% of riders making 1 change	34	29	30	37	32.5	32.4
% of riders making 2 changes	11	29	11	20	17.8	21.2
% of riders making 3 changes or more	3	8	4	5	5.0	5.8
Length of ride-time:						
Average number of minutes	22	31	25	29	26.8	28.5
% riding less than 15 minutes	36	12	19	15	20.5	16.5
% riding 15-29 minutes	38	35	44	35	38.0	36.8
% riding 30 minutes and over	26	53	37	50	41.5	46.7

* Adjusted for size of basic and riding populations.

TABLE II

	No. 1 Wpg, Man. Nov./48	*No. 2 Mtl, Que. Oct./49*	*No. 3 Van, B.C. Nov./50*	*No. 4 Tor, Ont. Nov./51*	*Four-Study Averages*	*Wtd. Aver.* *
Basic Population (15 yrs. and older)	245,000	1,020,000	425,000	875,000		
Audience as % of population:						
Highest Card	58	35	42	31	41.5	37.0
Average Card	33.4	24.2	26.1	22.9	26.7	25.0
Audience as % of riders:						
Highest Card	66	44	50	38	49.5	45.3
Average Card	38	32	31	28	32.3	31.1
Average audience by age groups:						
% of basic population 15-29	37.7	28.7	32.4	33.9	33.2	31.9
% of basic population 30-44	32.4	22.7	26.7	21.9	25.9	24.0
% of basic population 45 and over	29.3	20.1	20.8	13.6	21.0	18.9
Average audience by economic groups:						
% of upper quarter of basic population	26.8	19.5	22.0	17.6	21.5	20.0
% of second quarter of basic population	36.2	26.8	29.4	24.7	29.3	27.4
% of third quarter of basic population	36.6	24.3	26.5	23.7	27.8	25.6
% of lower quarter of basic population	34.5	33.6	26.7	23.9	29.7	29.2
Average audience by riders of different frequencies:						
% of riders making 5 round trips a week or more	46	39	42	40	41.8	40.6
% of riders making 2-4 round trips a week	34	29	25	21	27.3	26.1
% of riders making 1 round trip a month to one round trip a week	21	19	21	16	19.3	18.5
Average audience as % of population, 15 years and older: Sex:						
% of men	35.2	26.4	25.1	20.6	26.8	25.0
% of women	31.8	21.4	27.0	24.9	26.3	24.5

* Adjusted for size of basic and riding populations.

Conclusions of the Studies

The riding and reading habits of the car card audience in Canada's four largest markets, where 3,339,667 persons (or some 27% of Canada's entire population) reside, provide at least some measure on which the power of the transportation advertising medium may be assessed. The data contained in Tables I and II may be summarized as follows:

1.—Four out of every five persons, or 83.3% of the population 15 years and older ride street cars and buses.

2.—A slightly higher percentage of women (86.0%) than men (80.8%) are riders.

3.—The largest group of riders consists of those who make five or more round trips per week.

4.—There is considerable uniformity in the degree of coverage of the four economic classifications.

5.—The average length of ride is 26.8 minutes.

6.—The length of ride varies directly with the size of the city.

7.—More riders (55.3%) make one or more changes than the 44.7% who complete their journeys on a single vehicle.

8.—The average audience of an 11″ x 21″ car card displayed in half the vehicles of a transit system for a period of one month constitutes 25% of the entire population 15 years and older.

9.—The average audience of the highest scoring card is 37% of the entire population 15 years and older.

10.—Audience scores on individual cards run as high as 58% of the entire population 15 years and older.

11.—The tendency to read is approximately the same for men (25.0%) as for women (24.5%).

12.—Related to population 15 years and older the average card is seen by approximately 25% of each of the four economic levels.

13.—Readership varies with age groups.

14.—Readership varies with frequency of riding.

Resulting Cost Calculation

By applying the audience scores to the space rates, it is possible to calculate the cost per thousand readers. These results for the four studies are as follows:

Average cost per thousand readers of the high-scoring card in each study:

For the four studies $1.40

Cost per thousand readers for high-scoring card in each study:

1. Study No. 1, Winnipeg $1.03
2. Study No. 2, Montreal $1.37
3. Study No. 3, Vancouver $1.19
4. Study No. 4, Toronto $1.77

Cost per thousand readers for the average 11″ x 21″ card:

For the four studies $2.06

Cost per thousand readers for the average card in each study:

1. Study No. 1, Winnipeg $1.78
2. Study No. 2, Montreal $1.94
3. Study No. 3, Vancouver $1.95
4. Study No. 4, Toronto $2.39

The general importance of the data on cost per thousand readers is increased substantially by the nature of the precision sampling technique, which makes it possible to project the figure to the entire basic population. Of the above data, the "average cost per thousand readers of the high-scoring card in each study" appears to be the most significant, in that it includes only high-scoring cards, and therefore is a measure of potential results with the most effective car card design, and also, because it is an average figure, it minimizes the influence of extremes in both readership and rates.

The "cost per thousand readers for the average 11″ x 21″ card" is valuable as a measure of results with average effectiveness of cards.

Value of the Studies

The Continuing Study of Transportation Advertising has earned the medium the reputation of being a leader in supplying useful statistical data based on the most advanced techniques, which are being adopted by other media. It has also furnished information by means of which some common misconceptions about the medium are being refuted, among these, the concept that car cards reach only the lowest income level. Specifically, it has produced evidence that car cards are read, and by immense audiences — even by the most conservative measurement. Moreover, the increasing amount of information and its conformity to a pattern have tended to permit the extension of conclusions to cities not yet surveyed. The importance of this can be more readily appreciated when it is realized that now transportation advertising in forty cities, serving some 6,208,122 people, who ride to the extent of 154,128,315 times per month is offered to the advertiser on a sound basis.

Similar studies of other media have recently been undertaken, and it is to be hoped that in the future, validated research will help even more to build confidence in media circulation reports and to provide a sounder basis upon which media selections may be made.

Colour — Today and Tomorrow

W. E. Carswell

The increased and more efficient use of colour is one of the most dynamic movements afoot today, and businessmen can well profit from the selection of suitable colours for interiors, exteriors, products, displays, and advertisements. Towards this end, Professor Carswell has outlined the history of colour organization, the intricacies of colour reactions, the functions of colour, and the steps in colour selection in an attempt to pave the way for fruitful cooperation between the colour specialist and the executives who may seek his assistance.

THE records of almost every civilization show that increased use of colour has followed increased wealth both for individuals and for nations. There are, of course, exceptions to every rule, and one of the most colourless periods of recent times was that of the late Victorian era in England, sometimes called the second of the dark ages, when the court mourning of the widowed queen, coupled with the complacency of unusual security, produced subdued colours quite unrelated to Britain's great wealth.

However, in Canada today we are not subdued by long court mourning, and certainly there is no complacency of security. We are living in one of those vital periods when the only limit to the use of colour is cost and, it is to be hoped, good taste. It does not actually cost any more to paint a factory green than gray, but to use a variety of colours correctly, that is, to put the right colour in the right places, does require time and expert advice which will cost the owner money. No executive group, to my knowledge, in recent years, whether of factory, church, or school, has opposed colour variety except for the cost of application, the cost of colour advice, and fear that in any case too much courage could lead to disaster.

The time when there was doubt as to the value of colour environment to the worker, the worshiper, or the student is gone. It is generally accepted that the use of good colour is better than the lack of colour. Unfortunately it is true that bad or disturbing colour relations are worse than monotony or worse than playing safe by painting everything in one

quiet colour. In one case, the walls of a certain office were painted too bright a yellow in an attempt to imitate sunshine. Both typists and bookkeepers found it impossible to work in the room all day, and as the employer refused to change the colour, they were put to the personal expense of consulting an oculist and buying tinted glasses.

Successful colour depends on the relation of the colour to the purpose for which it is required. The first problem for anyone considering a colour scheme is to decide its most important function and its dominant relationship. Is the colour to be related to his personal taste as in a living room or public taste as in a retail store? Is it to appeal to snap judgment as in a child's toy or repeat sales as in men's suiting, such as English tweeds, which have been in demand for many years? Is it to be of three minute appeal as in a window display or three year appeal as in a factory or office interior?

Different kinds of colour are suitable for different purposes, and having chosen the kind of colour, for example, grayed colours in offices, bright, strongly contrasting colours for outdoor advertising, etc., the real success of any scheme depends upon the relationship among the colours. The choice of colour by personal taste, which was the only method in the past, is no longer satisfactory in this decade.

The Age of Colour

If history repeats itself, the finest colour compositions the world has seen or will see, based on logic and system, will be produced in the next ten years. A very limited number of our sensual responses have been organized and given a language, and colour is the most recent. There is as yet no language to express pain, taste, or smell, though a German has written a book on taste. The human responses which have been organized are those of form, sound, and colour.

About 2,600 years ago Pythagoras, the Greek, organized form and shape into what we now call geometry. He developed a mathematical language with which every regular curve could be expressed in words and numbers. Greek relics show that the nation became imbued with the beauties of regular form. Within two hundred years the people had developed an appreciation of fine and perfect geometrical form, which is expressed in the Parthenon, built in 438 B.C. The Parthenon was the most involved and perfect geometrical structure that has ever been built. It could easily be duplicated today, but the people would not be as interested as the common Greek people of that day. They were riding on the crest of the wave of interest created by the organization of form and the development of a language to express it. Their appreciation made the great effort on the part of the architects and builders worthwhile.

About four hundred years ago sound was organized, and the language of music created. It then became possible, for the first time, to

record and convey sounds without making a noise. Man has always had musical instruments upon which notes could be played, but no real progress was made until it became possible to record sound by means of notes. Within a hundred years of the creation of this system, music was written that has never been surpassed, and most of the musical instruments which we know today were invented. There were innumerable concerts and music study groups on every hand to stimulate the composers and encourage the inventors.

Colour Organization

In spite of Sir Isaac Newton's studies of light, it was not until the period of 1900 - 1920 that colour was successfully organized. This was done at the same time by Munsell, an American, and by Ostwald, a German, whose work was completed and published in England. A third important colour atlas was published in Argentina in 1947 by Villalobos. These three parallel and workable systems successfully record, name, and show the simple relations between all conceivable colours. The human eye can discern somewhere between two and ten million. The three systems supplement rather than contradict each other, much as three different musical instruments would.

The systems arrange all colours in a roughly spherical solid with a vertical axis composed of the neutral colours, black, gray and white. Black and white and colours such as red, blue, yellow, and their derivatives occupy separate segments of the solid. The purest example of each hue is at the equator of the solid.

It is in the arrangement within each hue of chromatic colour that the different systems differ. Each accents slightly different colour relations, but all systems show their colours equal visual steps apart and give every colour a name, number, or notation.

Colour solids, atlases, and charts have many uses, the most obvious being colour identification. The colour of any object from a brick to a sapphire can be simply written for record or communication; that is, the hue, value, and chroma of a sapphire can be matched to a chart colour, but the pigment on a chart can never look like a sapphire because of a difference in reflection qualities. The architect, decorator, or even wallpaper manufacturer can record whole schemes for future reference.

Colour charts are carefully arranged so that colours fall into groups, having simple and obvious relationships which produce harmony. The characteristics which the colours in a group have in common are (a) similar hue, (b) similar value or reflection factor, (c) similar chroma which is grayness or purity, (d) similar amount of black, (e) similar amount of white, or (f) similar gloss.

It would appear from the above that, with suitable charts, colour harmony and colour matching can be handled by rule and are quite a simple process. Unfortunately this is not true. Whereas a note in music for instance is a constant thing even in combination with thousands of other notes, a colour changes in appearance with every changing circumstance.

Aesthetically, the organization of colour has opened up new fields, though we still need old-fashioned good taste. The colour atlas can no more give us beautiful schemes without the skill and taste of the colourist than a piano can produce beautiful music without the skill and taste of the musician. In both cases, some training is necessary, and just as it is possible for a person with little ear for music to learn to play a tuned instrument like a piano with the aid of written music, so a person with little colour sense can learn to use a tuned instrument like a colour solid quite effectively with the aid of colour notation. Charts are a real *aid* in the search for beauty. In all human reaction, however, a sense of harmony is experienced through the recognition of relationship or through the feeling that things belong to each other.

Individual Impressions

Taste or preference is a result of fashion, of pleasant and unpleasant colour memories and associations, and also of sex and age and some heredity characteristics of the eye usually referred to as colour blindness.

Everyone's appraisal of any given colour changes a thousand times a day because of the construction of our eyes and the reaction of our brains, but the changes are small and usually unnoticeable.

The Changeability of Colour

If individual colours change with circumstances as in after-image or illumination, etc., thus changing their influence on us, it is obvious that the relation of colours to each other also changes. Colours that are suitable and functional and pleasant under one set of circumstances cease to be so under another set.

These changes are a pitfall for the amateur, but are the most valued tools in the hands of the expert. If you are not aware of them and make no allowance for them, they can ruin your schemes and belie the system, but if you understand them and not only make allowances, but actually take advantage of them, they can make your colour schemes more exciting, more interesting, and more successful.

1. Gloss. Two samples of the same colour, one matte or dull and the other shiny or glossy, cannot look alike under more than one angle of incident light or one colour of light.

2. Simultaneous Contrast. Two samples of the same colour will look different if their surroundings or backgrounds are different. A dark background makes the sample look lighter; a light background makes it look darker. A red background makes the sample look greener; a green background makes it look redder.

3. Area. Large areas of complementary colours like red and green make each other look brighter through simultaneous contrast, but if the areas are very small like dots, diffusion causes them to counteract each other, and the result is neutral gray.

4. Bleeding. Every colour is altered by the effect of a colour previously observed. If one stares at a colour for twenty seconds, the eye produces the complementary colour for the next five seconds.

It may be noted that simultaneous contrast is a permanent effect and after-image is temporary.

The Adaptable Eye

It is not difficult to restore confidence in the system, however. If you are aware of these peculiarities on the part of the eye, the advantages are just as great as the disadvantages.

The eye itself is capable of considerable adaptation. It sees objects much the same in bright light as in dull light and makes some allowance for coloured light. If you wear strong green glasses, for instance, the eye produces a pale pink after-image, and you can see things in their proper colours.

Experience enables you to make surprising deductions without effort. You can tell the difference between gray paper and white paper in shadow. If you look through yellow glass at a green bottle partly full of red ink, the brain can figure out that the bottle must be green, and the eye will register green even though no green reaches the eye. You make deductions of this sort a hundred times a day.

Some Effects of Poor Colour Combinations

Suppose a colour combination is unsuited to its purpose or that a good scheme is changed by circumstance to something other than intended. What difference does it make?

It can make all the difference between pleasure and displeasure, between profit and loss. Packages which have just the right colours sell the most goods. Toys of just the right colour delight the most children. Displays which have just the right colours attract the most people. Homes painted just the right colours give the greatest pleasure, and working areas correctly coloured promote the highest efficiency. For example, soap manufacturers constantly use blue packages to make clothes look whiter. With blue they combine a pale greenish-yellow and white. These

colours are never seen on boxes of breakfast food or canned goods. Firms selling these goods use a dark purplish-blue, a strong orange-yellow, a variety of clear, bright reds, and a considerable amount of black. This gives maximum impact on display shelves. Drug store packaging is relatively subdued, often in one ground colour with lettering in black or white. Essential quality can afford to be quiet.

Frequently an unsuccessful colour is only slightly different from the right one, but makes all the difference between success and failure. One Christmas following the war, most red seals and decorations were brownish, just slightly off the familiar Christmas red. They did not appeal to the public, and consequently most of them remained on merchants' shelves.

A colour expert who was an officer in the R. C. N. convoy escort on the North Russia run in the last war, reports that as they approached the Arctic circle, icy, unfathomable darkness clothed the ship, giving the men a feeling of insecurity such as not even air bombing could inspire. The light of day which we take so much for granted was denied them for from four to six days, and many of the men were unable to stand the strain. Officers as well as men were affected. An average of two percent of the crew went temporarily insane and had to be "put in irons", as the navy expresses it. Everyone was considerably depressed. As the food, the ship, and the degree of danger remained unchanged, the only explanation seemed to be the absence of colour as seen in daylight. When at last the ship sailed out of the darkness enough to see a pale, sickly sun for a few minutes, despondency and insanity vanished as if by magic. With the lengthening again of the daylight hours, the ship returned to normal.

A somewhat parallel case exists for the crews of the modern snorkel submarine, which does not have to surface for days at a time. The U. S. N. set up a committee to experiment with interior colour schemes for submarines to combat melancholy. Grayed, cool colours in the confined spaces did help, but colour was not the complete answer. A plywood lining, having a conspicuous natural wood pattern, in the narrow corridor connecting the two ends of the submarine made more difference than any other one thing. Very deep sponge rubber chair seats covered with natural leather added to the feeling of well-being and consequent contentment.

It is interesting that mechanical pattern is avoided as being one possible road to unbalance, but that the patterns in nature are found to be the best resistance to ennui. This is a warning for those repainting offices or factories. Retain or incorporate some natural wood surfaces and also use a leather or fabric upholstery and soft curtains in offices if possible. Texture and pattern *combined* with colour can affect environment.

I was in a foundry recently where a fine, almost black dust covered every visible surface and absorbed all direct light. The lighting fixtures were glaring spots against the velvety ceiling which, though it was twenty feet high, seemed to press upon one's head. Windows along one wall were covered with cobwebs and whitewash. The whitewash reduced the glare and also obliterated a very beautiful view of parkland. There is no doubt that here, too, the navy's two percent would become unbalanced, but would be described as incompatible or would be lost in labour turnover figures.

These extreme cases indicate what happens to a lesser, perhaps imperceptible, degree in many factories and offices under less serious conditions.

Functions of Colours

Choice of colours can be divided into two steps: (1) the decision as to the function of the colour scheme, and (2) a logical selection of the correct colours to obtain the desired result.

To give pleasure through harmony is only one of colour's many functions. In many places, generally accepted colours are used for recognition of such things as hydrants, letter boxes and traffic lights. In large plants, increasing use is made of colour codes to govern the colours of dangerous moving parts, first-aid equipment, fire apparatus, pipes containing acid, and traffic control lines, etc.

In packaging, colour contrast is used to attract attention. Colours may also be used to suggest the contents of the package. In outdoor display, colours should be used to aid legibility and attract attention. This again requires the use of strong contrast. In indoor display of merchandise, inherent colours can be enhanced by the use of after-image and by the "simultaneous contrast" of merchandise to background. The principle consideration concerning single colour objects is agreement with colour preferences. The subdued colours of building exteriors are a result of available building materials, but are also aesthetically best for our wide range of seasonal environments. Contrast accentuates differences between parts, and similar colours decrease differences. Colours may be used with the greatest freedom and effect in room interiors.

Guides in Colour Selection

After determination of the function of the colour scheme, selection may be guided by psychological factors, seeing conditions, position of colours, contrast, colour relationship, and eye appeal.

Some colours produce emotional effects. Warmth is produced by the basic shades of red, orange, and yellow. Coolness is produced by the blues and greens. Light and gray colours suggest spaciousness, and full, strong colours and dark, rich colours suggest closeness and security.

Excitement is created by strong contrast between colours or between light and dark or vivid and gray, and also by some forms of discord. The most common examples are in places of entertainment. Repose is produced by similarity of colour, tending to coolness and grayness and avoiding extremes. Bright and light colours are cheerful, while black and certain dark drab colours are depressing. Appeal to the emotions is obtained by a strong dominance of one colour or of any one characteristic listed above.

The best seeing conditions exist when surfaces are non-glossy, when ceilings are white, thus reflecting the greatest amount of light, and when floors and walls in normal eye range are darker. Strong light and shade conditions must be avoided by shielding sources of direct light and glare and painting shadow areas with colours of high light reflectance. Walls, or the area to which the eye travels from its seeing task for rest, should be painted with colours determined by the colour nature of the task.

Advancing colours make rooms seem smaller and objects larger and closer. The advancing colours are derived from the basic colours of red, orange, and yellow. All dark colours also have this effect. Receding colours, derived from green, turquoise, and blue, make rooms seem larger and objects smaller and farther away. All light colours act similarly.

Maximum contrast is required for clarity of detail, and minimum contrast can be used to subdue objectionable detail.

Colours which have expected and recognizable relationships give pleasure. Discord has impact, gives shock and sometimes displeasure. It exists when unexpected relationships are deliberately or carelessly used.

Colour for eye appeal is used where quick appreciation and impact are required. Maximum eye appeal depends on the balance of each colour by its complementary, and on the balance of light by dark and of gray by bright colours.

Thus colours selected for a factory interior should provide: (a) strong contrast on work surface, (b) walls functioning as complementary rest areas (c) high light reflectance from ceilings, (d) psychological effects, (e) equalization of brightness contrasts, and (f) harmony among the colours. Hospital room requirements might all be psychological, such as: (a) cheerfulness, (b) spaciousness, and (c) harmony, or (a) coolness, (b) repose, and (c) harmony.

Suppose that functional requirements show clearly whether the scheme should be warm or cool, light or dark, and intense or gray, what is the final step in actually picking the colours? Here is a sort of recipe, the limitations of which are an advantage under most conditions, though they would place undue limitations on an impressionist painter.

Colours can be separated into three groups: monochromatic, analagous, and contrasting. Monochromatic colours are all taken from one hue. For instance, a scheme in orange, cream, brown, and buff would be monochromatic. It would be restful, dignified, and homogeneous, but also, of course, could be monotonous. The analagous scheme is composed of hues close together in the colour circle like orange, yellow-orange, and yellow, with as many derivations of each hue as desired. This is still somewhat restrained, but is more lively than a monochromatic selection. The contrasting scheme is composed of colours far apart in the colour circle and usually complementary, such as orange and blue, and of course any of the derivatives one can get by mixing these full colours with black or white or gray. This is the most common colour combination and can satisfy every situation not covered by the other two.

It is safe and the best practice to limit the number of hues to three, allowing an unlimited number of colours in each hue. A fourth hue adds trouble, and more hues are likely to cause confusion. In area the grayest colours should always occupy the largest areas, and the intense colours, the smallest areas. In a three-hue scheme, it is good practice to use one hue for the grayest colours in the largest areas, the second hue in medium intensity colours in medium sized areas, and the third, of greatest intensity, in the smallest areas.

Charts for Practical Purposes

Even with such aids as the above our colour knowledge is far from complete, and the best one who has colour problems can do is to obtain the aid of a specialist who possesses experience and what colour knowledge is available.

There is a universal movement on the part of the people selling colour, whether in the form of paint, paper, fabric, or printer's ink, towards some logical system based on colour sequence charts and colour notation. Though a majority of colourists use the general charts, many specialists such as those in the paint industry have developed charts of their own based on these. Paint company charts are influenced by the necessity of showing colours that are simple to mix rather than colours that have simple optical relationships. The relations among their colours, however, are sufficiently similar to those of the more theoretically perfect scientific charts, that all the philosophy regarding harmony and discord, similarity and contrast, and the analagous and complementary is available to the paint colour man.

Any of the one thousand colours of the Martin-Senour Company Nu Hue Colour System can be produced by the admixture of only eight base colours and black and white. The Colorizer of Imperial Varnish Company has thirteen hundred colours which cover very thoroughly a limited range of the most used colours. The colours are arranged to

show each colour at its best through contrast, thus obscuring atlas-like relations among the colours. The Tri-Tex System of Sherwin-Williams has less than one hundred colours in a limited range of very obviously related colours considered most suitable for interiors. An unusual feature is a questionnaire which draws to one's attention most of the things that need to be considered in the logical approach to a functional scheme.

Any good systematic sampling of the colour solid used as a tool by the skilled colourist enables him to add the logic of scientific knowledge to his taste and experience. Even most paint companies who have no scientific system are arranging their numerous colour samples in related groups which, in good hands, can serve somewhat the same purpose.

A Challenge Towards Greater and More Efficient Use

Many new books on colour are being published in England, Europe, and America every year. Paris has opened an institute of colour information. Berlin starts this year to publish a magazine called *Colour.* Most American magazines have reached the point where eighty-five percent of their advertising is in colour. They are unlikely ever to increase this percentage since it is thought that a smaller proportion of black and white would make it more conspicuous than the expensive colour advertisements. The number of articles on colour in popular magazines is a stimulus to observation on the part of the public. The magazines also guide our taste in furnishings, clothes, automobiles, kitchen utensils, etc. One manufacturer of all-white refrigerators believes so strongly in the selling force of colour that he puts the word "Colour" across the top of his advertising page in five hues, followed by this statement: "You can now have a refrigerator to match your kitchen. We will supply a plastic tab to go under the door handle in any colour you desire."

This is a period of development in colour photography, coloured television, coloured advertising of coloured materials, and even new fluorescent colours not previously produced by man. Consequently, all classes of society are more colour-conscious than they have ever been before, or probably will be again. Although most colour responses are subconscious, it is in a period such as this, when colour is a subject of common discussion, that conscious appreciation is most positive and subconscious reaction most evident. Businessmen, through the conscientious selection of effective colours for their buildings, equipment, products, displays, and advertising, not only will guide the progress of this movement but also may well profit from its impact.